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## ADDRESS.

## RETROVERSION OF THE UTERUS.

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BY FRANKLIN H. MARTIN, M.D.

CHICAGO.


Retro-displacement of the uterus is one of the most important conditions which the gynecologist and the family physician are called upon to remedy in the treatment of female complaints. It is important because the condition frequently exists, because it produces a long train of symptoms which frequently end in invalidism, and because it is frequently ignored if discovered at all by physicians whose experience ought to teach them better.

Because the uterus is a movable organ, because it is behind the bladder which must fill and empty, and in front of the rectum which must distend and contract, because it is subject to the intra-abdominal pressure with every inspiration and expiration of the woman; because it is fixed with elastic and muscular supports which protect it from sudden jars; because of all of this it does not prove that there can be no normal position of the uterus and hence there can be no pathologic displacement. A man's arm has a normal range of movement in order that it may accommodate itself to its environment and perform its function, but that does not argue against a possibility of pathologic dislocation of the arm.

### APPROXIMATE NORMAL POSITION OF THE UTERUS.

In order to diagnose and treat a dislocation of the humerus one must know the normal anatomy of the parts. While I have reason to believe that there are physicians of reasonable appearance who do not apply this same rule in the practice of pelvic disorders, I affirm that every family physician or gynecologist who depends upon his own knowledge for making diagnosis of pelvic difficulties should not only know pelvic anatomy but should also be able by repeated practice to detect abnormalities.

The uterus, Fig. 1, in its normal location is suspended in the pelvis with the fundus lying a fraction of an inch below a line drawn from the top of the symphysis pubis to the promontory of the sacrum. With the subject in the upright position the body of the uterus inclines forward on an angle of about 45 degrees with the horizon. The cervix lies within an inch and a half of the sacrum. The body of the uterus projects from the top of the vagina in a forward direction at about right-angles to that muscular tube. The fundus of the uterus occupies such a position in the pelvis when normal that the intra-abdominal pressure deflected from the anterior abdominal wall strikes it just posterior to its crest in a direction to force it, if at all, in an anterior direction.

The supports of the uterus are the broad ligaments which suspend it with side expansions, the vaginal tube resting upon the peritoneum supporting the cervix, the two folds of peritoneum called the sacro-uterine ligaments holding the cervix near the sacrum with the anterior vaginal wall acting as a counterpoise suspending it in front. The round ligaments act as stays preventing the uterus from being forced into retroversion by sudden impulses or jars. So that it has supports from almost every point, and in no case are the supports immovable and fixed. It is surrounded with cushioned supports and elastic guys, while its free fundus is embraced in a canopy of soft ever-yielding intestines. No organ in the human body is more carefully protected from violence from without or from its immediate environment from within.

### THE FEMALE PELVIS.

The female pelvis upon which the destinies of the human race so much depend is not only a box of wonderful security, but it is a stronghold of marvelous nervous mechanism. The uterus is connected with and has extensive automatic control of almost every organ in the body. No other organ except the heart has such universal sway over the whole economy. From the time that puberty begins in early maidenhood until the well-earned rest is secured at the menopause the immense network of sympathetic nerves surrounding the uterus is ever ready to perform herculean tasks. If conception occurs it must automatically, at once, begin a work which is the most remarkable thing in the world. It compels the heart to send more blood for nourishment of its new life, it compels the brain to create an appetite in the individual, it compels the stomach to digest larger quantities of food and the intestines to increase assimilation. It strengthens and expands the peritoneum, it softens the cartilage of the pelvis, it expands its own supports, it enlarges its environment without pathologic consequences, it develops the breasts and fills them with fluid, and when at a certain hour on a certain day the climax of gestation is reached it touches the spring which sets in motion all of the awful machinery of labor, which contracts its own powerfully developed walls, relaxes and lubricates the soft parts through which the child must pass, compels abdominal contraction at the proper time and when finally the labors are finished it telegraphs less blood to the pelvis, more to the breasts. It contracts its own walls, narrows its blood supply, furnishes an antiseptic fluid of soothing quality for the soft track of its outlet and in a remarkably short time has returned to its normal size and position.

When we stop to think a minute of the wonderful accomplishments of this uterus, and realize that its functions of menstruation or gestation are constantly maintained for thirty years it does not seem unreasonable that a displacement of the organ with a consequent disturbance of its sympathetic nervous connection will produce disastrous results.

Retroversion of the uterus produces *local* and *remote* subjective symptoms.

The *local symptoms* are produced by the disturbance the dislocated organ produces by pressure on neighboring parts. Constipation may result from direct pressure of the uterus on the lower bowel. Sacralgia or backache may be produced by direct pressure of the displaced fundus on the sacral nerves. This (displaced fundus) may draw upon the support of the bladder or the displaced cervix from forward pressure, may too disturb the function of this organ. This displacement of the uterus frequently forms flexures of the broad ligaments which interferes with the return venous circulation of the organ and produces a passive congestion with symptoms of heaviness. Pain in the ovaries and tubes may result from the same cause.

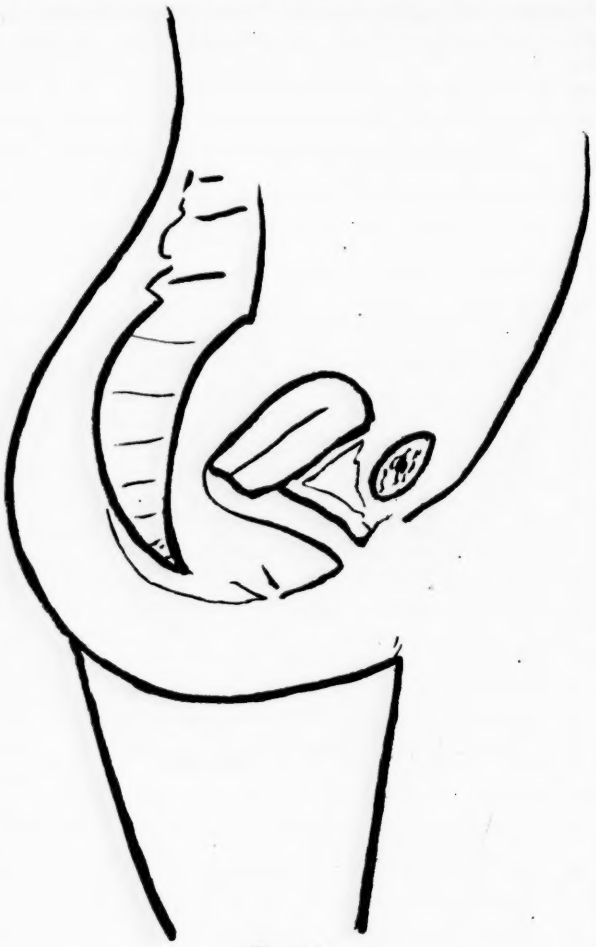


Figure 1.

The organ from its increased weight and from lying with its long axis parallel with the vagina (Fig. 2) slides into a lower plane of the pelvis and gives rise to the distressing symptoms of "bearing down." These symptoms are all aggravated by exercise of the patient and the upright position of the body because these things exaggerate the displacement. Menstruation is invariably disturbed and more or less pain is seldom absent.

*Remote symptoms.*—The remote symptoms may be as multitudinous as the nerves which connect the organs of reproduction with other organs of the body. While the uterus in health has such positive influence on the functions of other organs, it is easy to understand how, when in distress, just this intimate connection might disastrously disturb the normal functions of these neighbors. Such is the case. Palpitation of the heart, poor digestion, nausea, intestinal disturbance giving rise to imperfect assimilation, bladder irritation, backache and almost invariably severe headaches are a few of these symptoms.

*General symptoms.*—After the suffering woman has been allowed to bear the constantly harassing symptoms from month to month, with the cause becoming more and more fixed, with poor assimilation leading on to anemia, with rampant reflexes gradually endangering the balance of the nervous system, we find the subject growing thin in flesh, we find her despondent in spirits, especially aggravated each month when the labor of painful menstruation is superadded, her will forces become less resistant to the nerve storms, hysteria supervening and what was once a healthy woman is transformed into a thin, weak, white-skinned, aching, despondent, hysteric invalid.

Figure 2.

*Diagnosis.*—While the subjective symptoms already rapidly recited must give us a clew to the local condition, it is the objective signs as gained by an examination of the pelvic organs which must make or confirm our diagnosis.

With a knowledge of the normal conditions well fixed in his mind the physician should proceed to make a thorough examination of the pelvis. The patient is placed on an office table or a bed with her legs flexed and her feet supported in a pair of stirrups, or on two chairs if the examination is on a bed. The examiner with the index finger of his left hand well soaped or otherwise lubricated, standing or sitting close in front of the patient, between her separated knees, should proceed to make a vaginal digital examination, reserving the strong right hand for external

palpation. In an instant he will determine if the perineum is lacerated, whether the anterior or posterior vaginal walls are projecting. He immediately reaches the cervix. If it is well back in the pelvis it would be well nigh impossible for retroversion to exist, because the overhanging sacrum would throw the fundus forward, and by placing the finger in front of the cervix it can be proved by grasping the fundus in front (Fig. 3). If the cervix is well forward and low in the pelvis, then look out for the retro-displacement of the fundus, for then by placing the finger in front of the cervix the hand from above will approach it with no fundus to be felt between (Fig. 4). By placing the finger behind the cervix in such a case if the fundus is retroverted it can be palpated in that position, thus proving conclusively that the uterus *is* retroverted (Fig. 5). While the uterus is grasped

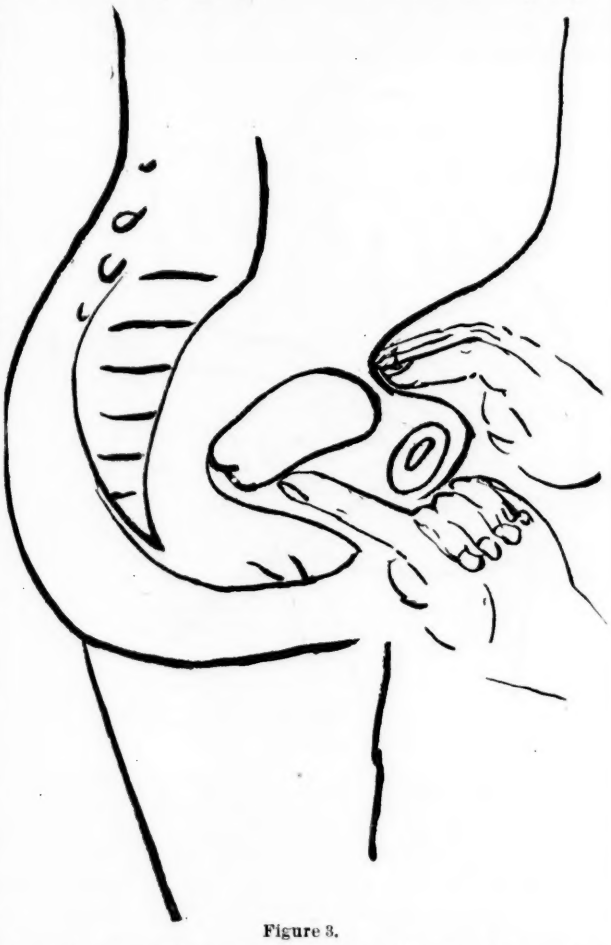


Figure 3.

in such a position any irregularities of its surface, its size and something in regard to the amount of its mobility can be ascertained. In fact an expert in bimanual palpation of the pelvis can easily by some such systematic course as described above determine not only the position, shape and size of the uterus, but also the condition of the appendages. If the parts are tender, or the patient a virgin, or the pelvic walls unusually resisting or thick, an anesthetic should always be given in order to accomplish a thorough examination. In fact it should be followed as a rule that an anesthetic should be given when an examination without one leaves any doubt. Whenever the uterus appears fixed in retroversion an anesthetic should be given in order to confirm the diagnosis as frequently an apparently adherent uterus becomes dislodged and movable under the relaxing influences of ether.

*Treatment.*—Without going more fully into etiology, more minutely into methods of examination, or into a more exhaustive study of the anatomy of the pelvis, than the foregoing hasty discussion will allow I must hasten to the more practical part of my subject, viz., treatment. And here, too, I can but touch on general principles with the elucidation of but one or two important practical applications.

For the treatment of simple persistent retroversion without adhesions or with laceration of the perineum or diseased appendages two possible means of cure may be adopted.

*Without Operation.*—One can not safely promise a cure in any case of retroversion without finally resorting to an operation but after taking the precaution to explain to a patient before treatment is begun that

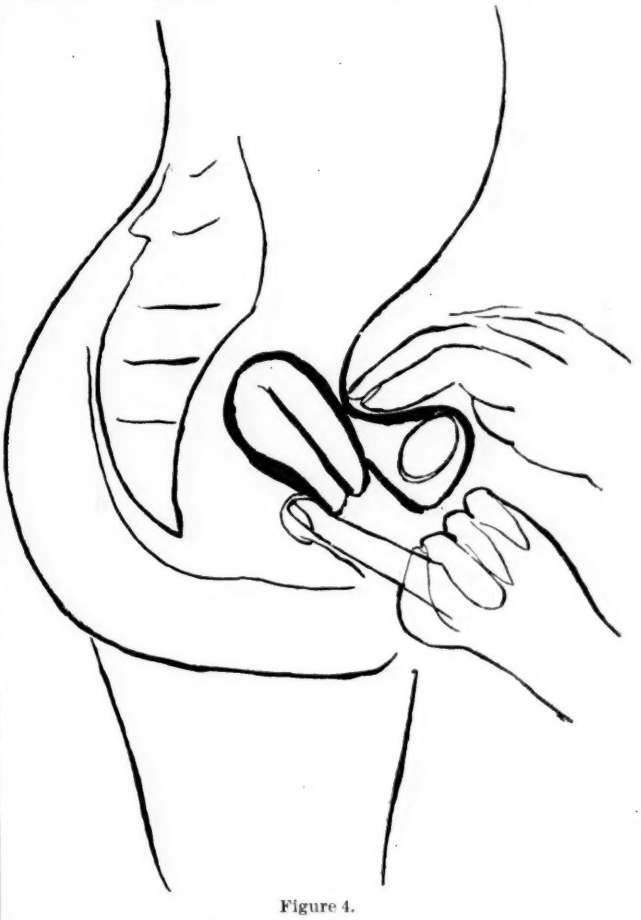


Figure 4.

non-operative treatment *may fail*, one is justified in making an attempt (with patients who can wait) to cure without operation.

The treatment here should be the replacement of the uterus and the retention of the organ in place by a well-fitting Hodge-Smith pessary, or the replacing of the uterus at each treatment by means of well placed tampons, keeping them in position until just before the next treatment, and all this supplemented by a judicious application of local tonics and stimulants.

To be more exact, my method is as follows: I replace the uterus by bimanual manipulation, by forcing the cervix backward and drawing the fundus forward (Fig. 6). I then select a pessary which will lengthen the vagina, thereby keeping the cervix back

in the hollow of the sacrum, and whose posterior bow will force the fundus forward.

I then place in the vagina a vaginal electrode and over the replaced fundus an abdominal sponge electrode and apply a slow break faradic current of electricity, applying it as strong as the patient will bear without pain and for a period of five minutes. This stimulates all of the muscular supports of the uterus and that, too, when they are in a state of relaxation. The patient is then instructed to get into extreme knee-chest position three times a day and when in that position to open the vagina so that it will be distended with air by retracting slightly with her finger the perineum. This reverses temporarily intra-abdominal pressure, throws the uterus forward by gravitation, and forces the cervix into the hollow of the sacrum by ballooning the vagina with air. The patient takes the local stimulation of faradization

Figure 5.

three times a week and at each time the uterus is examined to make sure that it remains in place. The surgeon should by bimanual manipulation stretch the shortened supports and force the uterus into extreme antiversion at each treatment. After a month's treatment the pessary is carefully withdrawn, the patient is instructed to avoid violent exercise, is cautioned to assume the knee-chest position religiously, in order to avoid a relapse, and to report the following day. At this time the parts are examined and if the uterus has remained in place for the twenty-four hours without support one should be much encouraged. The ordinary treatment should be applied and a two days' respite given. And so, carefully, these cases should be nursed and about one out of five will reward you with a final cure.

Frequently after withdrawing the support the first time at the next visit the patient will announce a failure, her symptoms having already convinced her of that fact. Another month or even two months' treatment should be advised.

If a well-fitting pessary will not be tolerated, then at the end of each treatment, after the uterus is well in position, the patient should be placed in knee-chest position and with the aid of a perineal retractor and a pair of dressing forceps an elastic wood tampon should be placed in front and below the cervix (Fig. 7). This should be allowed to remain until the following evening when it should be removed by the patient and an antiseptic douche given. The patient should remember to assume the knee-chest position at least three times a day during the time she is receiving this treatment. All forms of violent exercise should be avoided and corsets should be abandoned.

These tedious forms of treatment will yield a gratifying result in about one case in five. This small percentage is well worth fighting for, however.

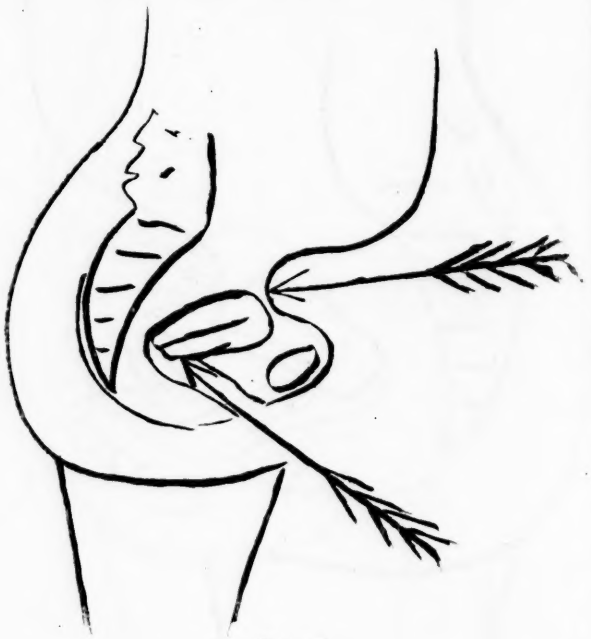


Figure 6.

*Alexander Operation.*—What shall we do with the failures under this head of non-adherent, but persistent retroversions? Unhesitatingly I say: Shorten the round ligaments. These cases require the slightest tension on the part of the round ligaments to make them permanently normal. The operation is safe and by my method of ligament fixation it is sure.

### RETROVERSION WITH ADHESIONS.

Adhesions of a retroverted uterus without concomitant disease of the appendages is a rare complication. However, cases will occasionally be found where adhesions have occurred from destruction of the epithelium of the opposing peritoneal surfaces as a result of pressure and friction without the intervention of a septic process. These adhesions occasionally I believe I have been able to separate by manipulation under anesthesia. If they do not yield by one manipulation under ether, we may hope by repeated massage, local stimulation of faradism and hot water and depletion to cause frail adhesions to give way without operative interference. After once overcoming the adhesions the case should be treated exactly

on the principles of those cases of non-adherent retroversions.

Adhesions of a permanent and unyielding character complicating retroversion where there is not serious disease of the appendages requires more radical treatment. While by an examination under anesthesia (and all of these cases should have such) one can not invariably say that the appendages are not seriously diseased, it is possible for one of experience to arrive at a pretty satisfactory conclusion. If then posterior fixation exists and the appendages, in the opinion of the surgeon, need not be sacrificed, he should proceed to break up the adhesions through the posterior *cul de sac*, after first cleaning the uterus with a curette, ascertain the true condition of the appendages, replace the uterus and retain it in position by shortening the round ligaments by Alexander's operation.

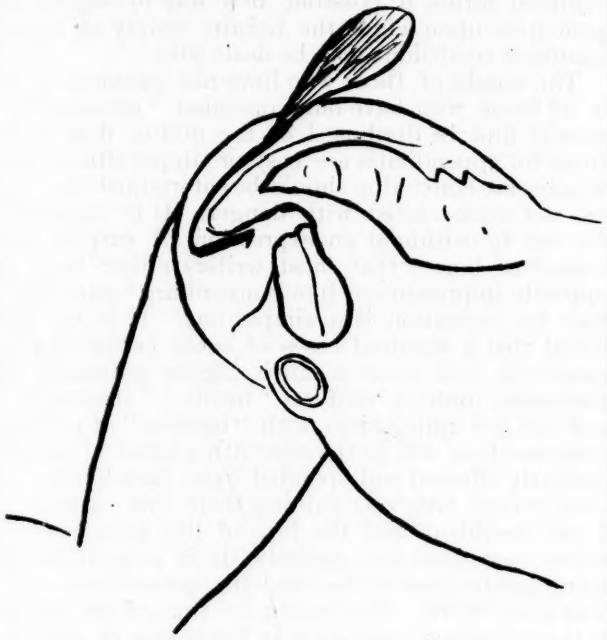


Figure 7.

RETROVERSION WITH DISEASED APPENDAGES WITH OR WITHOUT ADHESIONS.

Retroversion with diseased appendages, with or without adhesions, can, in my opinion, be successfully treated by laparotomy only. A small incision usually suffices. The uterus is sought for and the fundus freed by sweeping the finger between it and the adherent peritoneum. The diseased appendages are sought and treated by removal if necessary, or if simple cysts only exist they should be excised, disinfected and drained and then the uterus is brought well forward and suspended.

*Method of Suspension.*—I have adopted Fowler's method of ventral fixation or a modification of his method when the urachus is absent. The urachus, which ordinarily may be seen lying parallel with the abdominal incision on the peritoneum in the subperitoneal space, is avoided in making the incision and when the uterus is freed and ready for attachment the urachus is stripped from its surrounding tissue until a cord of two and a half or three inches is obtained, then the umbilical end is severed, leaving it attached low down in the pubic end of the abdominal incision. The uterus is drawn well up into the abdominal incision and the blades of a Cleveland forceps are passed from behind forward through the fundus just posterior to its crest. The points of the blades are separated and are made to grasp the free end of the urachus and by withdrawing the forceps the cord-like urachus is drawn through the top of the uterus. Now by grasping the free end of the urachus the uterus is slid along the ligament into extreme antiversion well below the lower angle of the wound. An antiseptic catgut suture secures the uterus in place and the free

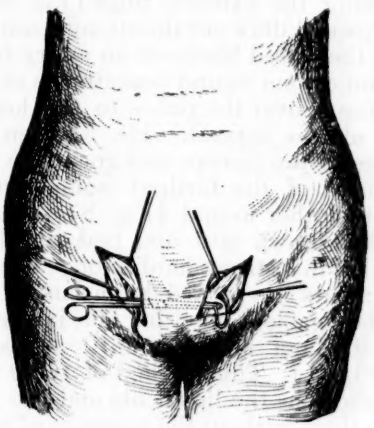


Figure 8.

end of the urachus is buried in the whole length of the abdominal wound as the wound is closed with its permanent sutures. This succeeds in suspending the uterus on an animal living ligament taken directly from the surrounding tissues, and the fact that the cord-like tissue is again immediately reburied in succulent, well nourished, living tissues insures its integrity. The uterus, therefore, becomes successfully fixed without the intervention of any kind of an artificial permanent or temporary suture which are always liable to become infected and give rise to troublesome fistulæ.

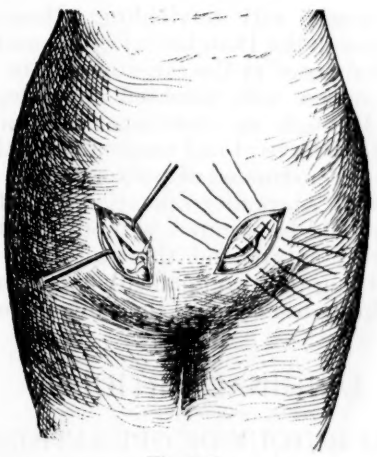


Figure 9.

When the urachus is absent, or divided and scattered as it occasionally is, I take a strip of peritoneum about one-half inch wide from the side of the incision, twist it into a cord and leaving the pubic end attached I treat it exactly as I do the urachus. It is in every way as efficient as the urachus.

I have done these two operations at least thirty times within the last year, and in no case has there been the least tendency to weaknass of support. I consider it superior to any other method I know.

THE AUTHOR'S ALEXANDER OPERATION.

With my method of doing Alexander operation some of you are already familiar, as I published it over a year ago. It is unique only in the method of fixation of the ligaments. As in my ventral fixation operation, in fixing the shortened round ligament I do not cumber my wound with any permanet or temporary buried sutures. I make the ordinary incision from the spines of the pubes, two inches in length, in the direction of the anterior superior spine of the ilium, exposing the external rings (Fig. 8). I separate the rings and draw out the strong round ligament. I then pass the closed blades of an artery forcep from the lower end of one wound beneath the skin, fat and superficial fascia over the pubes to the lower end of the wound of the opposite side. I then open the closed blades of the forceps and grasp the freed end of the ligament of the farthest wound and draw it through to the other wound (Fig. 8). The two ligaments are then drawn taut and tied tightly together over the pubes in a strong hard knot. The free ends of the ligaments are tacked by means of antiseptic cat-gut to the ligament on either side in such a way as to prevent the knot slipping until adhesions have occurred (Fig. 9.) This method of tying effectually and evenly shortens the ligaments and the knot thoroughly fixes them without the necessity of resorting to any kind of objectionable permanent suture. The wound is then closed over the ligaments in the ordinary way with temporary silkworm gut sutures.

SUMMARY.

1. Continuous retroversion of the uterus is a condition which frequently leads to serious pathologic consequences.

2. Retroversion without adhesions can be cured without operative interference in about 20 per cent. of the cases in which it occurs.

3. A small percentage of retroversion with adhesions can be cured by massage, electricity and depletion.

4. Retroversion with unyielding adhesions should be freed through the Douglas *cul de sac* and the round ligaments shortened at the same operation.

5. Retroversion with diseased appendages should be treated through an abdominal incision and the uterus brought forward and suspended on the urachus or a ligament constructed of peritoneum.

6. When the Alexander operation is performed the ligaments should be secured without resort to a permanent buried suture, and this can best be accomplished by tying the two ligaments together in a hard knot over the pubes beneath the integument.

## ORIGINAL ARTICLES.

### THE TECHNIQUE OF OPERATIONS FOR ACUTE APPENDICITIS.

BY WELLER VAN HOOK, A.B., M.D.

PROFESSOR OF PRINCIPLES AND PRACTICE OF SURGERY IN THE NORTHWESTERN UNIVERSITY MEDICAL SCHOOL; PROFESSOR OF SURGERY IN THE CHICAGO POLICLINIC; SURGEON TO THE GERMAN HOSPITAL.

The technique of operations for acute appendicitis has been studied and discussed by a splendid array of the world's best surgeons. Nevertheless opinions continue to differ not only as to the immediate objects of operative interference but also as to the technical methods by which these objects are to be accomplished. Some of the operators whose lists are longest and whose statistics make the best showing are extremely vague when it comes to a working description of their methods. The incision which each writer affects is carefully described; the statement made that the intestines are carefully protected by gauze; the appendix carefully removed or carefully left in and a few sutures inserted. But in my opinion the most important part of the operation consists in the protection of the normal serosa from infectious matter and the application of the gauze drain. These points are not carefully dwelt upon as a rule and one prominent writer says he fears he can not give an accurate idea of the method he employs.

This paper is not intended to exhaustively treat of technique in all the multitudinous forms and anatomic varieties of appendicitis, but rather to discuss the common forms, if possible, in a way to suggest the principles upon which the infinite variety of morbid anatomic conditions may be dealt with.

The minds of those who have not operated at all, or of those who have only operated "occasionally," should first be disabused of the notion that operations for appendicitis are easy or simple affairs and a wholesome conviction should be entertained that they are not unassociated with danger. It is impossible for me to withhold an expression of surprise and almost of horror that most writers either leave an opposite impression or like Sonnenburg[1] state boldly that the operation is a simple one. It is my firm belief that a hundred cases of acute perforative appendicitis will show a much higher percentage of recoveries under a uniform "medical" treatment of rest and hot applications with "lancing" of pointing abscesses than will be the case with a hundred patients similarly affected and operated upon by a hundred or even twenty surgeons gaining their first experience. I am confident that the loss of life from weak or faulty operations for appendicitis is proportionately much greater than is the case with operations in pelvic abdominal work. The reason for this greater danger is that a surgical operation in the course of appendicitis is an act of supreme violence—supreme because inflicted just at the critical point, the seat of virulent infection with the deadly inhabitants of the intestine. No surgical calamity can be more appalling than the uncontrolled distribution of pus from appendicitis to previously uninfected peritoneum. When this accident has occurred the fear of the patient's death is before us, no matter what surgical technique or detail of subsequent medical management be resorted to. It is the prevention of this accident, the unnecessary distribution of pus to normal serous membrane, that in these operations marks the man of surgical skill.

No medical man objects to the acquisition of experience by the tyro; he must make a beginning at some time. But ethics demand that except in cases of the utmost urgency the inexperienced operator abstain from drawing blood. Experience can be gained without much loss of life by assisting an older surgeon. A second proposition of equal importance is that none should begin operating on these cases who has not the inclination and opportunity to follow up his work and to so perfect himself in the beneficent art that his later cases may fare better than his earlier ones.

1 "Die Operation bei der Appendicitis perforativa ist eine einfache, und jeder, der mit den anatomischen Verhaeltnissen bekannt ist, wird sie leicht erlernen koennen." Deutsche Zeitschrift fuer Chirurgie, Bd. xxxviii, Hefte 2 und 3.

The *objects to be accomplished* in these operations should be clearly defined and borne in mind at the bedside and at the operation. None will deny that the first great goal to be reached is the saving of life. It is the cry of danger to life that has aroused the profession to the importance of operating at all and it is this which gains for us the consent of the patient to submit to a procedure which *is in itself dangerous*, although if indicated and properly done not so dangerous as the disease itself.

We can not conscientiously permit any departure from those technical details which most strongly promise the saving of life. In consequence we must subordinate to *this prime object* considerations of future comfort and convenience.

The *secondary objects* are, first the prevention of fistulæ; second the avoidance of recurrent appendicitis, and third the diminution of the risks of hernia.

The *preparation* for the operation by the surgeon, if the patient be not in hospital, involves in the first place obtaining the best nurse to be had, since her services will not only be required during the operation but will accordingly be of the greater importance in the after-treatment. A trustworthy assistant to stand opposite the operator is essential to the best work, to aid in preventing escape of pus into the uninfected abdominal cavity, to arrange sponges and keep them warm, to prevent breaks in the chain of antisepsis, to place and hold retractors, etc. An operating table must be provided suitable for the application of the Trendelenburg principle, if conditions are present before or arise during the operation to make it desirable. An ordinary kitchen or dining table will do in an emergency if the patient's feet are fastened to the end in such a way as to prevent his slipping toward the head of the table. A box or chair placed under the end of the table will raise its feet sufficiently. Elaborate preparation of the patient is usually impossible for lack of time. The cleansing and disinfecting of the skin should not be done in such a way as to jeopardize the integrity of the abscess wall if adhesions have taken place. Transportation of the patient even to a neighboring hospital is an extremely hazardous procedure. Every jolt and jar causes the patient to suddenly contract the abdominal muscles, menacing the normal peritoneum with a flood of infectious matter from perforated bowel or abscess.

The *position of the patient* should be subject to the varying demands of the operator as modified by the pathologic conditions encountered. Should pus be met with at the pelvic brim it may be necessary to prevent its flowing into the pelvis by quickly tipping the patient into the Trendelenburg posture. If the pus tends to flow toward the median line the patient may be rolled upon the right side. These two maneuvers may be practiced simultaneously if desired. The site of the incision must depend largely on the site of the appendix and the morbid anatomic conditions present. It must be so located as to give the most free and direct access to the seat of disease, except where we desire to avoid opening the free peritoneum. The median incision has been discarded except for the rare cases in which the cecum and appendix lie behind the linea alba.

The most rational *method of opening the abdomen* when the appendix lies in one of its more usual positions, is that of McArthur and McBurney. McBurney recommends that the skin incision, about 4 inches long, should cross a line drawn from the anterior iliac spine to the umbilicus nearly at right angles, about 1 inch from the iliac spine, and so situated that its upper third lies above that line. The aponeurotic structures are divided with the knife, but the muscular fibers are separated by blunt dissection. In this way a wound is produced at whose edges are muscular fibers running in different directions. These fibers, held apart by retractors during the operation, close the wound almost perfectly when the operation is finished, by overlapping. Unfortunately this method can not be applied except where an abundance of good assistance is at hand and where the wound need only be a small one. The general principle involved should be respected in all incisions involving the lateral regions of the abdomen, *i. e.*, the direction of the incision should follow the general trend of the fibers of the external oblique muscle and the fibers of muscles should be cut as rarely as may be possible. In this way nerve trunks may be avoided. It is to avoid nerve injuries that Kocher recommends our making only transverse or slightly oblique incisions except in the median line. Hence the old Langenbuch incision at the side of the rectus muscle, and the various longitudinal incisions over the colon must be given up. With Kocher's recommendation we must heartily agree, partly because the nerves supplying the rectus muscle should be held sacred, for fear of weakening that part of the abdominal wall by paralysis, but chiefly because the oblique incision gives perfect access to all ordinary foci of appendical inflammation and at the same time making the wound parallel with the general traction lines of the abdominal muscles prevents yawning of the wound and diminishes the tendency to hernia at the seat of operation.

The *length of the incision* must be adequate for all the manipulations required in the abdominal cavity. The wound should always be long enough to facilitate and not to retard intra-abdominal work. There is no essential advantage in operating through openings of especial shortness. On the other hand, making the wound unnecessarily long conduces to prolapsus of intestines and increases the liability to hernia.

Before going further a few *diagnostic points* demand brief consideration, since they concern most intimately the manipulations to be undertaken later. They are as to the site and the morbid anatomy of the appendix and of the adjacent structures. No diagnostic study of a case of appendicitis can be considered complete until these points are if possible determined. The *site of the chief pathologic activity* can be determined in the majority of instances, especially when a tumefaction exists or when tenderness is found. To discover these signs *a rectal* or vaginal examination *should never be committed* since a pelvic location or extension of the inflammation is by no means rare.

[I can not agree with Fowler, who says, "Generally speaking, it is not possible to demonstrate by means of a rectal examination in these cases anything which can not be made out much more satisfactorily by external examination; if the examining surgeon is to be the operator in the case he will do well to keep his finger out of the rectum." In several instances I have been able to make or to strongly confirm the diagnosis by this mode of examination; while in other cases the exact site of the primary or secondary focus has been made out.]

Pain at the end of urination is a sign of much value

in the diagnosis of inflammation of the vesical peritoneum.

In the cases of the gangrenous appendicitis, or in the perforative cases in which diffuse peritonitis takes place, the absence of a tumefaction and the presence of widespread tenderness makes a *diagnostic localization of the appendix* impossible.

A preliminary determination of the *relation of the inflammatory focus to the ascending colon* and to the ileum is also of great import. These structures, ileum and colon, act as barriers, water sheds so to say, tending to limit or retard the spread of inflammatory fluids. Abscesses to the outside of the ascending colon generally occupy a position well toward the flank and tend to extend as they grow larger toward the renal and hepatic regions. Moreover the tympanitic colon can often be detected by percussion, nearer the median line.

Inflammatory activity *below the mesentery of the ileum* tends to extend into the lesser pelvis and can often be located by rectal or vaginal touch. Our gravest apprehensions are excited for the patient's recovery when the site of inflammation is *mesial to*

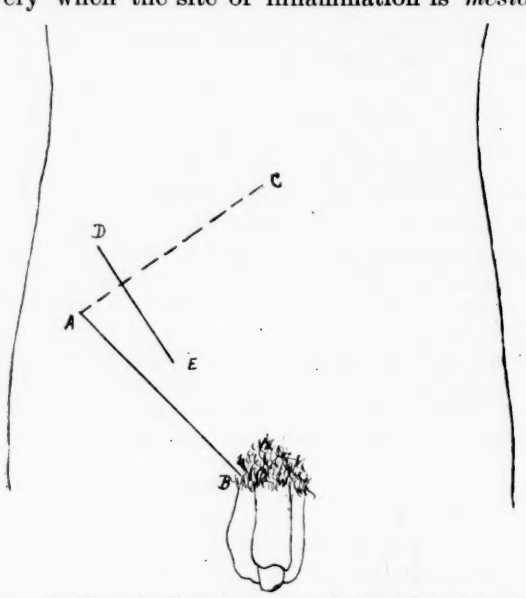



Fig. 1.—A B, Poupart's ligament; A, anterior superior spine of ilium; A C, line joining umbilicus and anterior superior spine; D E, line of incision recommended by McBurney, parallel with the course of the fibres of the external oblique muscle and its aponeurosis.

*the ascending colon* and above the mesentery of the ileum. The percussion relations of the colon are here of some value, but our chief dependence must be upon the situation of the tumefaction and tenderness well toward the median line.

The abnormal positions of the appendix are usually not determinable before operation unless the focus of inflammation can at once be located at a point remote from the usual site of the caput coli and be recognized as appendical.

*The Morbid Anatomic Conditions* to be encountered can be determined before operation only to a limited extent. It is partly on account of this very uncertainty that appendicitis operations may prove far more difficult after the abdomen is opened than they appeared beforehand.

The duration of the inflammation and the size of the tumefaction are points which often, not always, give a suspicion of the morbid changes to be encountered. Obviously a suppurative process of long standing (one to three weeks) can be considered to have brought about much adhesive proliferation. On the other hand, acute and violent symptoms lead us to suspect no such delimitation of the process by adhesions. And combining these general propositions, an inflammation which has existed for some time, but which has at the last advanced by sudden exacerbations, may be suspected to have become limited at first, but to have extended later by successive fresh invasions of previously normal serous membrane. Uncertainty in respect to the state of these new-formed barriers to the spread of inflammation is greatest between the third day and the end of the first week. No reliable diagnostic signs are as yet at our disposal to aid in deciding this important clinical question. Our efforts result only in a prediction of probabilities. From signs of violent activity of the disease, we assume the local extension of the inflammatory process. A tumefaction not apparently enlarging, in the presence of mild general symptoms, would of course suggest the limitation of the process by adhesions.

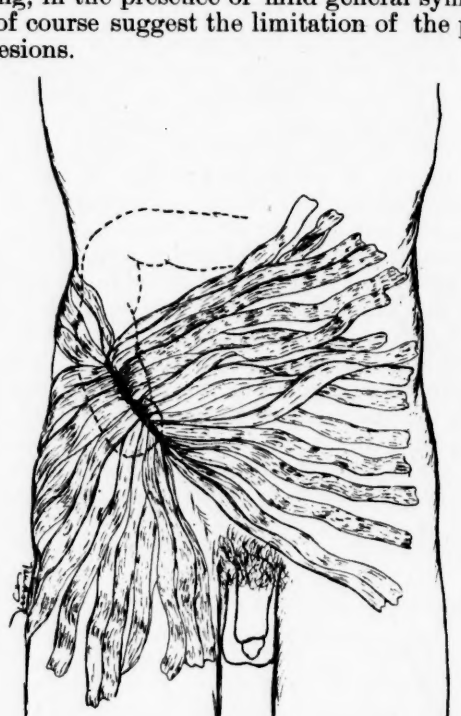


Fig. 2.—To show the appearance of the gauze strips before they are turned over to the right side of the patient's body.

Edema of the skin is usually an indication of the adhesion of the abscess to the abdominal wall and the operator in that case has the opportunity of simply draining the abscess without even seeing the free peritoneum. In one case I was able to push about in the abdominal cavity the caput coli with the abscess mass for a distance of three-quarters of an inch in each direction. The operation disclosed the fact that the omentum covered the coils of adherent intestines enclosing the perforated appendix. And as the omentum was not inflamed upon its anterior surface, the whole mass could be slipped about by external pressure.

An additional subject upon which to exercise our diagnostic acumen in future is as to the *amount of tension* present in the abscess-cavity. Much prognostic importance would attach to this knowledge if we could in any way gain it. Unfortunately we can only draw from our clinical study the vaguest inferences on the subject.

Having decided, as nearly as possible, these pre-

liminary diagnostic points we have to ask ourselves, *what is the technical task before us* when we undertake an operation for acute appendicitis. It is, we may say briefly in answer, to expose and drain an area of serous membrane surrounding the appendix, which is infected, usually with enormous quantities of bacteria of many species and often of the utmost virulence acting with the aid of most irritating fluids. If this were all—if the damaged tissues and the invading microörganisms lay beneath the skin or even immediately below and in contact with the abdominal wall, the case would be surgically simple. But this drainage has to be effected over a membrane the progressive infection of which means death to the victim of the disease.

Of what properties of this delicate serous membrane can we take advantage in attempting a practical solution of the difficulties to be met? First, our most important aid, our ever present help in time of need, is the enormous resisting power of infection presented by the peritoneum. No other tissue in the human body can so powerfully annul the pathogenic power of bacteria or so quickly and effectually remove disease producers as can the peritoneum. One-tenth the filth often cast into the peritoneal cavity without

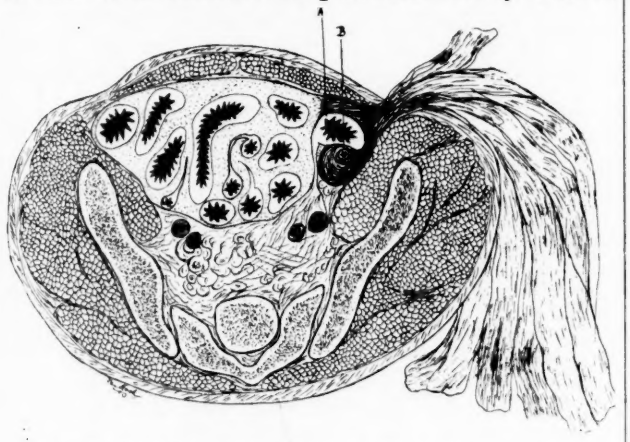



Fig 3.—To show the relation of gauze strips to the cecum (A) and the stump of the appendix (B), when the appendix lies between the cecum and the outer abdominal wall.

harmful results would cause fatal infection in the cranial cavity. In operating for appendicitis under the conditions assumed, we take advantage of this resisting power of the peritoneum and *deliberately inoculate a portion of the serous membrane.* Inoculation, however, is fortunately not always tantamount to progressive infection. But traumatisms, such as mechanical and chemical irritation, drying and cooling of the serous surface, tend to diminish resistance. These things can not be wholly avoided, and for that reason it is strongly urged that these operations are not, as is so often maintained, devoid of danger or even only slightly dangerous.

Our main surgical resource is found in *drainage by capillarity.* In the unopened abdomen the normal serous surfaces are not separated from one another by layers of gas or ordinary air. They lie in contact with one another, lubricated by a thin layer of serous fluid. A foreign fluid poured out between these surfaces is disseminated with extreme rapidity, partly by the action of gravity, but chiefly by capillary action. This force, which lifts the sap to the tops of the highest forest trees, is aided also by the vermicular action of the intestines. When about to open a *dépôt* of infectious matter it has been the usual custom to protect the intestines from contact with this material by means of large compresses. When the infected cavity has been evacuated as well as possible, the compresses were removed and pieces of gauze applied in their place to be left as drains, with the purpose of opposing the capillary action between serous surfaces and the action of gravity with the capillarity of the cotton fibers. I wish to urge the *preventive* application of this capillary drain. Before defilement has taken place in that part of the peritoneal cavity lying between the anterior parietal serous layer and and the dépôt of infection, the operator should apply gauze sterilized and, if not required in too great quantity, iodoformized, in such a way that it will attract fluids away from the intestinal interstices and not into them. This gauze, instead of the peritoneum beneath it, must henceforth be the surface to be protected by gauze compresses. The ends of the pieces of gauze are to be inserted into various spaces, as will be dwelt upon later in order to prevent by occlusion as well as by capillarity the dissemination of poisonous fluid. The strips of drainage gauze are not to be replaced by fresh gauze at the close of the operation for three reasons, to wit: 1. The repeated manipula-

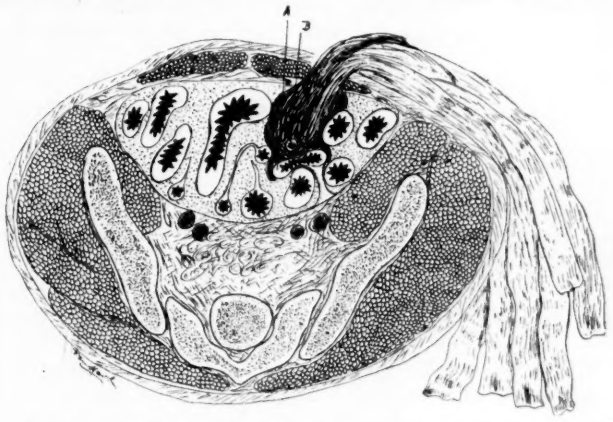



Fig. 4.—To show the application of the gauze when the appendix (B) lies in the midst of the small intestines, to the left of the cecum (A). This and the preceding drawing were made from photographs of frozen sections made by the writer after having performed the operation described in the text upon the cadaver.

tions of the intestinal serosa favor the ingress of the bacteria into the tissues. 2. The handling of the parts transports bacteria to previously clean areas. 3. The gauze, if properly applied, will carry outward, through the very long strips employed, the infectious matter contaminating their surfaces, which has escaped the carefully applied gauze compresses, that of course have been replaced as often as desired by the operator.

It is maintained by Gubaroff that the beneficent action of the absorbent gauze extends a distance of two and one-half inches on each side of its margin. This must be at least approximately true, since by no other assumption can we explain why capillary drainage enables us continuously to withdraw infectious fluids across the serous membrane without wide-spread inflammation. A recent autopsy by Dr. Fuetterer upon a case of my own, operated upon after general peritonitis had set in, confirms Gubaroff's opinion, Dr. Fuetterer says that for at least a distance of two and one half inches on either side of the gauze the peritoneum presented all the evidences of recovery from the violent inflammation.

For practical purposes it is of the first importance for the operator to decide before operation whether he has to deal with: 1, a morbid process not mechan-

ically limited. 2, a pus dépôt shut off from the uninfected peritoneum by delicate adhesions; or 3, a well marked abscess-cavity without strong adhesions.

Once a positive diagnosis of appendicitis has been made a probable determination of these morbid anatomic points must be reached by consideration of the points already mentioned, the most important of which is the duration of the disease. In a first attack of moderately severe perforative appendicitis effective adhesions may be considered absent up to the fourth day. Between the fourth and tenth days the bands of new connective tissue are becoming resistent and may be utilized in the operative treatment. After the tenth day the abscess (if it has not enlarged by successive ruptures) may be expected to have strong walls, requiring distinct pressure to break them down.

TECHNIQUE.

*In the absence of adhesions*, the proper preparations having been attended to, an incision is to be so made as to place the operator in full command of the region involved. It is important that the incision be made long enough before manipulations are begun within the abdomen. This having been accomplished, the first thing to be done is to apply a gauze barrier about the

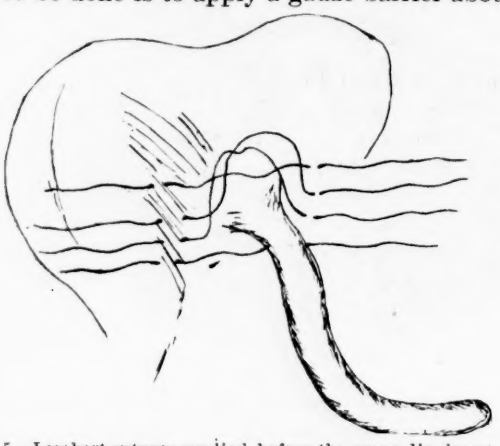


Fig. 5.—Lembert sutures applied before the appendix is cut off.

wound, so that exudate and feces may not soil the normal peritoneum. For this purpose, strips of plain sterilized gauze and of iodoform gauze will have been prepared by the nurse, two and a half inches wide, fifteen to eighteen inches long and four layers in thickness. The iodoform gauze will be used for all packing if the quantity required is not so great as to threaten iodoform intoxication. If this is feared plain gauze will be used for preventive packing and the iodoformized material reserved for the immediate drainage of the disease focus. An assistant now places a large dull-edged retractor under the abdominal wall at the edge of the wound and by strong traction perpendicularly to the abdominal parietes lifts the wall upward and away from the intestines. The operator then pushes the end of a ribbon of gauze under the abdominal wall between the parietal peritoneum and the intestines for a distance of one to three inches, in a direction at right angles to the line of incision. This piece of gauze is to be flattened out rather neatly. The retractor is now moved aside in either direction for a short distance and another piece of gauze inserted by the side of the first one, with whose edge it lies in contact. This process is repeated if free peritoneal surface surrounds the wound, in every direction, so that as the operator looks into the wound, the edges of the incision are seen to be covered by gauze extending out into the abdominal cavity. If the inflammatory focus lies in contact with the lateral parietes, the gauze barrier must be applied with great care to prevent infection of the pelvic cavity below or the hepatic region above. For this purpose the incision must be low enough to enable the operator to get well below the appendix. Strips of gauze are then passed down toward the pelvic brim until the surgeon is sure that this avenue of infection is reasonably well closed. This maneuver may be facilitated by the temporary use of the Trendelenburg position. Equal care must be taken to guard the hepatic fossa by a similar method. For, while a patient may escape with his life, if this large area be infected, since it is in a sense isolated from the rest of the peritoneum, the extent of the surface is so great that even the primary intoxication due to flooding with feces and pus is of most serious import, especially as the chief resorption area of the peritoneum, the centrum tendineum of the diaphragm, is located here.

The object of this packing is, 1, to prevent as far as possible infection of the peritoneum when the disease focus is disturbed; 2, to set up enough peritoneal irritation to determine a serous discharge, so that outward capillarity along the strips of gauze may conduct infectious matter away from the free peritoneum[2]; and 3, to favor the formation of adhesions

Fig. 6.—Lembert sutures tied after removal of the appendix.

about the tract through which drainage is to be effected.

The second step has for its purpose the finding of the inflammatory focus and its immediate treatment. The operator carefully covers the visible parts of the gauze strips with gauze compresses wrung out of warm (105 degrees F.) salt solution, and with the edges of these compresses he presses aside loose coils of bowel until he reaches the seat of most active disease. If the location of the offending part has not been determined by palpation before operation and if a real search is necessary the longitudinal muscular band of the colon is an infallible guide, leading the surgeon at once to the seat of trouble. The appendix having been found, a quantity of feces, pus or sero-pus will gush upward almost invariably and must be caught on compresses, which, as fast as they are replaced by fresh ones, must be carefully discarded to prevent their being used again. The cecum is not to be lifted from its original site, if by so doing the least additional danger of infection is to be incurred. Before removing the appendix the operator carries his strip of gauze packing well down to the infected region surrounding the dangerous area, thus completing the well of gauze through which the work is done. Far

[2] See paper by the writer, Amer. Obstet. and Gyn. Jour.

better would the surgeon leave the base of the appendix closed by a strong catgut ligature at the bottom of such a well protected cavity, than by lifting out the cecum from the wound, spread the virulent bacteria often present over uncontaminated serous membrane. But if the cecum can be thus lifted up without risk of infection, *i. e*, without risk of pouring infectious matter into parts of the peritoneal cavity unprotected by adhesions, a piece of gauze is slipped under it, the appendix is amputated by incision between a thin but strong temporary ligature on the proximal side and a compression forceps on the other. The projecting mucosa is then touched with a drop of carbolic acid and a row of Lembert sutures passed from side to side over the stump of the appendix. These sutures are not tied until the temporary ligature has been removed. But when this has been done the stump is inverted into the cecum and the Lembert sutures knotted. A second row of sutures may be placed if desired. This elaborate technique is rarely practicable in acute appendicitis.

Hemorrhage from the arteries of the mesenteriolum is controlled, if need be, by ligatures or suture ligatures. If the cecum has not been lifted, drainage of the deeper cavity is effected by some additional strips of iodoform gauze and, if the operator chooses, by a tubular drain. If it is found that the infectious fluid has already traveled between the intestines in any direction or to any extent, it is carefully followed with sponges, cleansed away by gentle pressure with gauze sponges and gauze drains left in contact with the infected serous membrane. The practice of lifting extensive masses of intestine from the abdominal cavity to clean them seems to me illusory. They are much better treated by surrounding them with gauze drains which can be subsequently removed, if necessary under anesthesia. The ends of the gauze strips are to be left very long so that they may hang over into hydrophile dressings at the side of the patient, since the writer has shown that the dependent part of the gauze strip delivers fluid partly by gravity and partly by capillarity at an exceedingly rapid rate, thus enabling the intra-abdominal portion of the strip to lift fluid against gravity without the embarrassment of imperfect delivery upon the surface of the abdomen. This method of placing the gauze drains almost all the fluid to the patient's side. I have often found the gauze and cotton dry at a distance of two inches from the wound on the left side, while on the right side of the body toward which the strips were directed, not only the dressings but the bedding and mattress were soaked with exudate.

The last step consists in the partial closure of the wound. The point at which the drains are to project is determined, the gauze being made to emerge in as short a line as possible from the site of inflammation. Silkworm gut or silver sutures are inserted above and below the drainage opening and tied. The same material is to be used for secondary sutures, the threads being introduced at the sides of the gauze mass but not tied until the drain is removed.

It is *when adhesions exist* in easily recognizable degree and mass but while they are still easily broken down by the finger-tip that the technique is as yet farthest from being settled. All are agreed that the appendix is to be removed if it be near at hand on exposing the focus of inflammation. Others say it may be removed if in the operator's opinion this can be done without breaking down the abscess wall; some say if the appendix do not constitute a part of that wall.

Shall we remove the inflamed appendix at all hazards, as advised by still another set of clinicians? There is at present no more popular clinical problem in all surgery or one, perhaps, better worth consideration. Some bold operators say it is always to be removed; that operations without its extirpation are "incomplete;" that undiscovered abscesses may be left undrained; that recovery is slow; that fistulæ and sinuses remain and recurrences are to be expected. Unfortunately statistics can not help us at present, for our clinical classification of cases is so poor that a reported death rate of 15 per cent. by one operator may be an index of no better work than would be indicated by a mortality rate of 20 per cent. by another man whose run of cases is different. Of course the man who operates on all cases, even the mildest, will make a better showing than will he who chooses for the knife only those of well marked severity. He who gets his cases on the third day will have a brighter list than will the man whose patrons call him in council on the fourth. Statistics of appendicitis operations indiscriminately gathered furnish no trustworthy information.

The question that arises in our minds when we approach our cases of appendicitis for operation is, How can we operate to save life? All other questions are secondary. All considerations of surgical nicety and personal satisfaction must give way. What is the main anatomic object to be accomplished by operation *when adhesions have formed?* You will agree that it is to relieve by outward drainage the tension in the abscess cavity—to make a safety-valve. When this has been properly done our chief excuse for interference is exhausted. Further work in the abdomen is dangerous. To what extent is it justified by securing to the patient immunity from other ills? The "aggressive" surgeon says, if we do not find the appendix we may leave a secondary abscess unopened. The "conservative" operator replies that secondary abscesses do not very frequently occur; that he does not consider removal of the appendix necessary to the discovery or drainage of the secondary abscess; and that the manipulations necessary to effect extirpation necessarily disseminate pus and, by injuring the peritoneal surface, invite infection. The aggressive man urges that recovery is prolonged if the offending member is not plucked out, that fistula or sinuses may remain, and that the patient is exposed to recurrences. His opponent argues that even if the first statement is correct, a few more days spent in bed can not be so serious a matter as the additional operative risk; that fistulæ and sinuses do not often occur, and can be cured with comparative safety by an operation instituted when virulent pus has well nigh disappeared; that tenderness and occasional pain over the appendix region will usually warn the patient after the acute attack is over, if a chronic inflammation exists which is capable of being lighted up into a new acute attack, so that the part may be removed during the quiet stage. The percentage of recorded recurrences after drainage seems to be small. Fitz placed it at 11 per cent. No one should underestimate the value and satisfaction of leaving the patient freed of the dreaded appendix; but it seems to me we should not too strongly urge the operator, especially if inexperienced, to go too far toward this ideal. The conservative ground is here the safest to advise. Remove the appendix when you feel confident that by so doing

you will not scatter pus or destroy the wall of adhesions which encloses the dépôt of infection. Success in these operations depends largely on the use of a proper system of gauze packing. On opening the abdomen the wound is first carefully surrounded with gauze strips, as already described, passing between the abdominal parietes and the superficial layer of intestines wherever they are not adherent. The next step consists in the application of the gauze about the coils of intestine which are matted together to retain the infectious material. The operator should palpate with the utmost gentleness to ascertain what portions of bowel are non-adherent and therefore to be isolated from those nearest the appendix by the protective packing. These deeply seated strips of packing material are to be carried well back to the posterior parietal layer of peritoneum. They must touch one another from side to side and must be spread out evenly. All knots and coils of gauze must be avoided with great care. This can be accomplished most easily where the end of each gauze strip can be carried to its destination on the tip of the finger. No strip is to be folded longitudinally upon itself in order to fill up cavities. When spaces are to be filled in, additional pieces of gauze are to be used, each one coming to the surface of the abdomen by as a direct a route as possible. The infected area is not to be encroached upon for any purpose, diagnostic or therapeutic, until the peritoneum is protected by gauze. Once the operator is sure of his protective gauze the infected area is to be opened and drained. This is done deliberately by working the finger gently between the adherent coils of intestine until the exudate is reached. Direct drainage to the cavity is then affected by a strip of gauze which may enclose a tubular drain if the operator desires. If removal is not practicable, the intestines are carefully retracted with gauze compresses or strips and the drains inserted deeply enough in the track of the pus to assure the operator with reasonable certainty that no pockets of pus are without a vent. It is much safer to carry the drainage down to the appendix itself, even if it is not removed.

The location of the inflammatory focus with reference to the great barriers to the spread of infection is of the first consequence in estimating the safety and justifiability of these manipulations.

*Foci situated between the ascending colon and the right lateral abdominal wall* offer conditions relatively very favorable to manipulation, since the colon acts as a watershed to turn the course of infection from the main part of the abdominal cavity. Before opening such a focus the surgeon takes care that the space between the anterior surface of the colon and the abdominal wall, if not obliterated by adhesions, is protected by gauze strips and that the upper and lower boundaries of the infected area are well protected by packing to prevent the infectious matter from traveling upward toward the liver or downward toward the pelvis. This technique needs but slight variation when the appendix lies farther down *i. e.*, in the internal iliac fossa.

It is when the inflammatory disturbance lies mesially to the colon and above the ilial mesentery that the greatest difficulty exists in protecting the peritoneum during the operatian and in draining adequately afterward. In the language of Harris, "However well we may pack around with gauze, it is often impossible to prevent pus escaping into the general cavity with a resulting fatal peritonitis."[3] Presupposing that adhesions are slight or altogether absent, it is absolutely essential that the patient be placed upon a table which can be adjusted to the Trendelenburg position. The pelvis being elevated, the abdomen is opened, the gauze strips having been adjusted as usual about the wound, aseptic compresses are so placed as to receive any infectious matter emanating from the appendical region, and if any adhesions are present at all, the most delicate manipulations must be made in order to leave them intact and a drain of gauze, with perhaps also a tubular one, is to be passed down to the appendix. Should delicate adhesions be disturbed peristaltic action may carry the liberated small intestines to a distant part of the abdomen in a few hours together with the actively infectious matter adherent to their walls.

It should be mentioned that transperitoneal drainage has often seemed to various surgeons more hazardous than direct drainage of pelvic accumulations through the vagina or rectum. One of these routes may occasionally be used with advantage. If the inflammation has existed for a length of time sufficiently great to allow strong adhesions to form, binding an abscess wall to the abdominal parietes, it is the surgeon's duty to seek the most direct route to the abscess interior, the incision through the abdominal wall being made in such a way that the free peritoneum will not be injured. When abscesses are situated in the right iliac fossa adhesions will oftentimes be firm between the walls of the abscess and the outer abdominal parietes, even though the anterior wall be free. The incision in such a case should be made well to the outside of the focus of inflammation or even in the lumbar region.

The gauze drain should not be removed until five to eight days have elapsed, giving ample time for adhesions to have walled off the infected area.

[3] See the admirable paper of Harris, Journal American Medical Association, Dec. 1895.

## AN IDEAL SUTURE FOR THE CLOSING OF ABDOMINAL INCISIONS, CUTS ON THE HANDS, FACE AND BODY GENERALLY.

BY W. H. HAUGHEY, M.D.
BATTLE CREEK, MICH.

The ideal suture is one that, first, can be most readily and easily introduced; second, that holds the parts in perfect apposition with the least possible interference to the circulation of or at the edges of the wound; third, that is the least apt to become septic; fourth, that requires the least possible amount of suture material; fifth, that leaves the least possible scar; sixth, that can be relied upon to fulfill these requirements and after fulfilling them, can be removed.

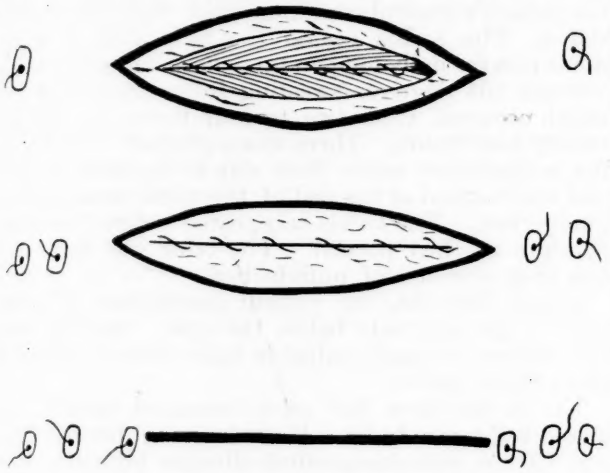
The old interrupted en masse suture, while fulfilling the first requirement of introduction well enough, utterly fails in all the rest except the last, viz.: removal, for by including the tissues from one-half to one inch on each side of the wound and tying them, the circulation is materially interfered with, thus preventing healing and promoting sepsis by reducing the blood supply and depriving nature of its best means of keeping the wound disinfected and promoting its rapid repair.

The buried animal suture is objectionable because

of its proneness to become septic despite our very best efforts at cleanliness and antisepsis.

In silkworm gut and silver wire we find the nearest approach to the ideal suture material that science has yet produced; either can be rendered aseptic and when so rendered, are almost absolutely non-irritating to living tissues. The problem is to so introduce them that they will meet the six requirements above stated. I have solved this problem thus: With a straight, sharp-pointed needle about one and three-quarters to two inches in length, threaded with silkworm gut (of the very best variety), I begin at the lower angle of the peritoneal incision on the left side, and with a simple spiral continuous suture rapidly close the entire peritoneal cut, bringing the end of the suture out about one and one-half inches above the upper angle of the incision in the skin, pass it through a thin aluminium plate and fasten by means of a perforated shot, then threading the needle on the other end, bring it out and fasten in the same manner about the same distance helow the lower angle of the wound. Do not make too much tension, but fasten just tight enough to avoid a slack suture.

In exactly the same manner introduce the suture in the muscular aponeurosis; here you may, if the cut



is long, with advantage use silver wire about No. 23 or 24, as it is probably stronger, and can be left as long as necessary with no danger of disintegration, though I have left silkworm gut five weeks and had no trouble in this respect. The skin suture is introduced in the usual manner of a buried skin suture. Fasten ends same as the other two. It will thus be seen that the first or peritoneal suture will be the longest and will be fastened farthest from the extreme angle of the cut at each end; the muscular suture is second longest and fastened in the center at each end, the skin suture shortest and fastened nearest the incision at each end.

No difficulty will be experienced in removing either the peritoneal or skin suture if they have been properly introduced; simply grasp the shotted lower end, lay the open blades of the scissors on the aluminium plate, draw on the suture, make counter pressure with the scissors until about one inch of suture is withdrawn, then clip, grasp the other end and draw the long or remaining end of suture out. The muscular suture will be found to offer, in many cases, much resistance, and if too strongly pulled on will break. This is not necessary. Simply draw what will come easily and fasten by means of a split shot and wait twenty-four hours, when you can easily draw more; fasten and leave again, and so on until the entire suture is removed.

I have also been using this suture for the past year in cuts, wounds and operations about the face, hands, or any part of the body. It leaves the least possible scar, offers the least possible interference to circulation, thereby promoting the healing process; can be left as long as you wish, can be readily and easily removed, and in fact possesses all the requirements as yet known to man of an ideal suture. Only the very best, smoothest and strongest silkworm gut should be used. This suture was exhibited to the Calhoun County Medical Association in Albion, January 14, 1897.

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## REPORT OF A CASE OF CHRONIC NEPHRITIS COMPLICATING PREGNANCY, LABOR AND THE PUERPERIUM.

Read at the meeting of the Obstetric Staff of the Chicago Health Department, Nov. 2, 1896.

BY LAWRENCE H. PRINCE, M.D.

CHICAGO.

I regret very much that more accurate observations were not made in this case, and also that many of the notes recorded were lost. However, I trust that the main facts as here reported will be of interest:

Mrs. H., of Irish descent, a bright, intelligent woman, 28 years old, I saw for the first time the latter part of December, 1895. She gave me the following history: As a girl she was always well and strong. She became pregnant shortly after marriage and the child was stillborn at term. When four months pregnant with this first child she began to suffer from sleeplessness, dizziness, edema and momentary attacks of blindness. After the seventh month all these symptoms became aggravated. The edema was general, even extending to the lips and to the tissues of the back. The lips and finger nails were often cyanosed. The urine was scanty throughout pregnancy. Labor was rapid, lasting about an hour, and unaccompanied by convulsions, or any other complications that the patient knows of. There was severe epistaxis, lasting one hour, the day following labor. Patient remained in bed three weeks, the edema gradually disappearing. She got up anemic, emaciated and weak. Her general health improved and there were no further subjective symptoms of kidney disturbance. Menses returned in two months.

Three months after the birth of her first child she again became pregnant. She remained in fairly good health up to the sixth month. From this time on she suffered as she had during her first pregnancy, though less severely. She was delivered of a living child at term, the labor lasting two hours. There were no complications at time of labor and for one week the puerperium was normal. She then had a chill, followed by three days of fever and abdominal pain. She remained in bed for three weeks, getting up weak and anemic, but improved rapidly afterward for a few months. She nursed her baby for fourteen months, the child growing stronger and the mother weaker after six months. After weaning the baby she became stronger. The child is still living and robust. Menses returned after the weaning of the child.

The patient's third pregnancy began eighteen months after the second child was born. She aborted

at three months. There was no edema prior to the abortion, but she had frequent "weak spells" and attacks of dizziness. Immediately afterward she suffered from nausea and vomiting and attacks of weakness, and had rather a severe hemorrhage after seven days. She did not fully recover from the results of this abortion for three months. Menses remained regular and patient's health remained fairly good for two years, when she became pregnant for the fourth time. This, the fourth pregnancy, began in October, 1895. At the time of her first visit to me she was about three months pregnant and in fair health. During the second week in January, 1896, she suffered from a severe attack of quinsy. A couple of weeks later her husband died of pneumonia complicating typhoid fever. During the ten days of his illness Mrs. H. assisted in the care of her husband and she received very little rest or sleep. I did not see the patient after this until she was six months pregnant, that is, in April, 1896. She said she had been feeling fairly well up to within a few weeks, and that she had voluntarily placed herself upon a diet consisting largely of milk, knowing from past experience that such a diet was best for her. Her feet and legs were becoming more and more edematous and she had begun to suffer from headaches, sleeplessness, dizziness and occasional momentary loss of vision. Examination of her urine at this time, and at intervals afterward, showed generally less than one litre passed in twenty-four hours, with a diminished amount of total solids and of urea. There was always present considerable albumin and large numbers of waxy and granular casts. There was also some pus in each specimen of urine. The treatment consisted in placing the patient upon an almost absolute milk diet, laxatives, and an occasional sweat. Her condition remained nearly stationary until two or three weeks before labor began. The old symptoms became aggravated with temporary relief after a profuse sweat or catharsis. Edema of the neck was especially marked, although there was no portion of her body that was free from swelling. On account of the edema of the neck there was difficulty in lying down, the patient thus securing little rest.

Labor came on the night of July 14, 1896, lasting but an hour, although there had been for a few days occasional preparatory pains. Aside from extreme nervousness and considerable muscular twitching, the labor was normal in every respect, and a living, though small and feeble child, weighing four and one-half pounds, was born. A few hours after labor, the patient was catheterized and the urine thus secured found to contain 5 grams of albumin to the litre. During the first few days of the puerperium the edema became gradually less, the patient's temperatura remained normal, and the lochia was normal in amount and character. Patient complained of no pain and was quite cheerful, but slept little and was restless. She was very anemic. The urine was scanty, highly albuminous and deficient in urea and other solids. From two to four copious watery stools were produced daily by means of cream of tartar. A strictly milk diet was adhered to. At 3 P. M. of July 16, the third day of the puerperium, patient had a severe chill lasting about fifteen minutes. At the completion of the chill the temperature was 101.6 degrees F. The chill was almost immediately followed by profuse perspiration and by 6 P. M. the temperature was normal. The following two days the patient's condition was practically the same as it had been prior to the febrile attack. On the morning of July 19, the sixth day of the puerperium, patient had another chill, lasting a full hour, the temperature at the end of chill being 104.5 degrees; pulse rapid. Profuse perspiration followed almost immediately, with rapid lowering of the temperature. An examination of the blood was made with a negative result, except that on one slide was found a single body bearing a strong resemblance to a malaria plasmodium. The spleen was very much enlarged. There was no headache, no abdominal nor pelvic pain nor tenderness, and the lochia was normal. There was no pain on micturition. In the absence of evidence of cystitis, or of pelvic inflammation, a provisional diagnosis of malaria was made, and accordingly quinin was administered, 2 grs. every two hours. At 3 P. M. of the same day, July 19, patient had another paroxysm, this time the temperature reaching 105 degrees, which again subsided in a few hours to 101 degrees. The urine was scant and contained 7 grams of albumin to the litre. On the following day the patient had three or four paroxysms, the chills becoming less severe with each. The temperature rose to 106 degrees the afternoon of this day, apparently without affecting the patient's general condition more than as already stated. The lochia ceased the next day, July 21. After this the daily temperature curve ranged between 100 and 104 degrees, sweating following each rise, which occurred from two to four times during the twenty-four hours. There was a gradual lowering of the temperature curve from day to day and the normal was reached at the end of the third week of the puerperium. The lochia reappeared before the temperature reached normal. The odor was faint and free from evidence of putrefaction.

About July 24, the patient complained of some pain in the right side below the ribs. An examination showed an easily palpable right kidney, enlarged and a little tender.

Up to this time the urine remained scanty, the amount for twenty-four hours varying between 250 and 750 c.c., containing much albumin but little pus. On July 24 there was an increase in the amount of urine and a sudden increase in the amount of pus, which was at first large and then gradually diminished. There was also an increase in the amount of total solids eliminated. There was some edema of the lungs and an irritable cough, worse at night, resembling whooping cough, from which her son was suffering.

The patient's general condition gradually improved; she soon was able to sleep better, and in three weeks was able to change from her bed to the couch. However, she remained emaciated and anemic for some time after. On the first of August her urine contained 1 per cent. of albumin, considerable pus and granular casts.

The patient works every day at her business, that of hairdresser and manicurist. She is living on a non-nitrogenous dietary, as for seven months past, and is slowly improving in strength and flesh. She has occasional spells of dizziness and blindness, nevertheless. On Nov. 13, 1896, she passed 1024 c.c. of urine, acid reaction, sp. gr. 1015, containing 1½ per cent. albumin, 10 grams urea, some pus and a few granular casts.

The child, which has been bottle-fed from birth, has made a desperate struggle for existence, and now

after four months, gives fair promise of making a success of it.

After a careful study of all the facts in the case, I feel confident that the puerperal febrile disturbances were due to pyelitis complicating chronic nephritis.

51 Lincoln Ave.

## OPERATIONS FOR THE RADICAL CURE OF HERNIA IN PERSONS OVER SIXTY YEARS OF AGE.

BY A. E. ROCKEY, A.M., M.D.

PORTLAND, OREGON.

*Illustrative case.*—Man aged 72. Ruptured forty years. Retention with truss always difficult ahd painful. For two years the hernia had not been reduced and had grown to enormous size. During examination the intestinal portion, representing about three fourths of its bulk, was reduced by taxis with some difficulty but an omental portion remained irreducible. A truss was adjusted but the hernia could not be retained. The man had chronic bronchitis and the paroxsyms of coughing soon sent the intestine under the truss. Radical cure by operation was recommended and accepted. Previous to operation the patient was kept in bed for two days and the cough much allayed by an anodyne mixture.

Chloroform was administered, the sac opened and a large mass of omentum, the lower end of which was firmly incarcerated in a small pouch, was removed after ligation with fine silk. The operation was finished after the manner of Bassini, using silk ligature and sutures. The patient made a rapid recovery and now after ten months the hernia remains perfectly cured and the general health, comfort and ability to exercise are much improved. No truss has been worn since the operation.

Appended to this article is a table of 144 cases, most of them unpublished, for which I am indebted to the courteous letters of surgeons I have the pleasure of meeting personally, both in this country and abroad. The list will suffice to illustrate the purpose of this paper in pointing out the advisability of the more general adoption of operative treatment for the radical cure of hernia in persons whose disability from rupture increases with advancing age. Under what circumstances should an operation for the radical cure of hernia be performed in the aged? It will be almost universally admitted that when strangulation makes herniotomy necessary it should be followed by an operation for radical cure except when contraindicated by gangrene or exhaustion. Beyond this point there is a wide divergence of opinion as to the propriety of performing operations for radical cure in the aged.

Jonathan Macready in his most admirable "Treatise on Ruptures" says in describing the indications for radical cure operations, "Whatever divergence of opinion there may be as to the kind of cases which call for an operation there is none in regard to the unfitness of aged and cachetic individuals." On page 367 of the same work is a table, the perusal of which may well suggest the question as to whether we have as surgeons, done our whole duty by the aged when we have dismissed them with this dictum, and then wait for them in the hospital, until the occurrence of strangulation removes all doubt as to the absolute necessity of operation.

This table is compiled from the statistical reports of St. Bartholomew's, St. Thomas', St. George's and the University College hospitals, for varying periods during twenty years and comprises in all, the records of 1063 operations for strangulated hernia.

Of these 749 were under 60 and there were 525 recoveries leaving a mortality of about 30 per cent.

There were 314 strangulated hernias in persons over 60 requiring operation for relief and but 146 recovered, leaving a mortality of 53 per cent. Observe the greatly increased mortality in the last class. A considerable part of this table antedates the general adoption of antiseptic surgery and for this reason and also that operations were then longer delayed than at present the total mortality is high. This, however, does not affect the relation between the two groups of cases and the fact remains that the mortality after strangulation in the aged is very great.

In the table which I have compiled we have the results of 144 operations for the radical cure of hernia in persons over 60 years of age done since the general adoption of antiseptic surgery. Of these eighty-three were strangulated, and there were sixty-five recoveries leaving a mortality of 23 per cent. I have tabulated these cases for the purpose of contrast with the results of radical operation in non-strangulated hernia where the operation is one of choice and not of necessity.

There were sixty-one of these operations with but two deaths, or mortality of 3.5 per cent. The fatal cases are Nos. 11 and 24 in the table. The first by Dr. W. T. Bull. Patient aged 80. Double inguinal complicated with hydrocele. Death by hemorrhage from atheromotous artery cut by ligature in omental stump. Here the cause of death was distinctly incident to age and what would have otherwise proved a complete success was defeated by this small yet significant accident. The lesson is an important one and has not passed unheeded. I recall vividly the emphasis which Dr. Bull placed on this source of danger in his paper and the fact that several times when scrutinizing an omental stump previous to returning it to the abdominal cavity, I had his words in mind. On one occasion an omentum had been ligated in four or five portions and was about to be returned when I discovered that one of the ligatures had slipped and the artery was leaking. Haste at this point would have lost the patient, and it is but right to give Dr. Bull the credit of having saved him, for I had learned the lesson of care by reading his paper. By a more general exercise of this care I believe that we may eliminate entirely this source of danger. In case No. 24, by Dr. Le Bec, the patient, aged 70, had an enormous scrotal hernia with adherent omentum, uncontrollable, with pad. Death occurred on the fourteenth day from pneumonia, the autopsy showing the peritoneum to be normal. Under these conditions the fatal result can only in a very indirect way be ascribed to the operation. This leaves us fifty-nine recoveries, which means much for the comfort of the time remaining to life after 60. How many of this number have been saved the greater danger of strangulation?

There are important factors, both of body and mind, the direct result of senility, predisposing to strangulation, and as the principal cause of mortality, they should not be overlooked or regarded as trifles. First of these may be mentioned diminished peristalsis incident to age. If we examine and give credence to the elastic strangulation theory of Sir Astley Cooper and the older writers, or to the *abknikung* theory of Busch, and admit that strangulation is even occasionally the result of fecal occlusion as stated by Kocher and Röser, then it must be conceded, that on account of diminished peristalsis the aged are in greater danger. More important than this, however, is the constantly increasing disability to reduce the rupture

| No. | Operator. | Ref. | Sex and Age. | Kind of Hernia. | Reason for Operation. | Kind of Operation. | Result. |
|---|---|---|---|---|---|---|---|
| 1 | G. Stanmore Bishop. | 1 | M. 63 | Left scrotal. | Patient's request. | Bishop's | Cure. Lost sight of. |
| 2 | Same | 1 | M. 67 | Left inguinal. | Could not wear truss. | Bishop's | Cure. Lost sight of. |
| 3 | Same | 1 | M. 63 | Right scrotal. | Patient's wish | Bishop's | No return after five years. |
| 4 | Same | 1 | M. 61 | Right femoral | Strangulation | Barker's | Recurrence. |
| 5 | Same | 1 | M. 60 | Double scrotal | Patient's request. | Bishop's | No return after three years. |
| 6 | Same | 1 | M. 62 | Right scrotal. | Strangulation | Ball's | No return after 2½ years. |
| 7 | Same | 1 | M. 75 | Rt. inguinal. | Truss unbearable | Bishop's | No return after eight months. |
| 8 | Wm. R. D. Blackwood. | 2 | M. 73 | Femoral. | Strangulation | Excision of sac. suture of ring | Cure. |
| 9 | Trevor Fowler | 3 | F. 68 | Umbilical. | Strangulation | Exc'n of omentum, ring closed with eight silver sutures | Radical cure. |
| 10 | Edgar Underhill | 4 | F. 81 | Femoral. | Strangulation | Exc'n and suture of omental plug in neck of sac. | Cure. |
| 11 | Wm. T. Bull | 5 | M. 80 | Dble. inguinal | For radical cure. Complicated by hydrocele and adherent omentum. | Ligature and excision of sac. | Death from hemorrhage from atheromatous artery cut by ligature in omental stump. |
| 12 | Same | 5 | F. 61 | Femoral. | Strangulation | Ligature and excision of sac. | Recovered. Relapsed. |
| 13 | Same | 5 | F. 61 | Femoral. | Irreducible. | Ligature and excision of sac. | Recovered. |
| 14 | Same | 5 | F. 60 | Femoral. | Strangulaiion | Ligature and excision of sac. | Recovered. |
| 15 | Same | 5 | M. 71 | Inguinal | Strangulation | Ligature and excision of sac. | Cured; no relapse; no truss. |
| 16 | Same | 5 | F. 76 | Femoral. | Irreducible. | Ligature and excision of sac. | Relapsed. |
| 17 | Same | 5 | F. 60 | Femoral. | Irreducible. | Ligature and excision of sac. | Cured. |
| 18 | Same | 5 | M. 63 | Inguinal | Irreducible—10 years. | Lig. and exc'n of sac with sut. of external ring; omentum removed | Cured; no relapse. |
| 19 | Same | 5 | M. 65 | Inguinal | Strangulation | Ligature and excision of sac, with suture of canal. | Relapsed. |
| 20 | Murdock Chisholm | 6 | F. 77 | Inguinal | Strangulation | Suture of omental plug to pillars, Lig. and exc'n of sac. | Cured. |
| 21 | Robert O. Callaghan | 7 | F. 74 | Umbilical. | Stranguiation | Lig'n and exc'n of omentum; purse-string sut. of sac, silkworm gut suture of ring | Cured. |
| 22 | Same | 7 | M. 78 | Inguinal | Strangulation | Ligature and excision of sac; stump returned into canal. | Cured. |
| 23 | Same | 7 | M. 84 | Inguinal | Strangulation | Same as above | Cured. |
| 24 | Dr. Le Bec. | 1 | M. 70 | Inguinal | Enormous. Unable to control with pad. Adhesion of omentum. | Ligature and excision of sac; suture of canal with silkworm gut. | Died on 14th day of pneumonia. Peritoneum normal. |
| 25 | Same | 1 | M. 71 | Inguinal | Strangulation. Adhesion of omentum to sac | Suture of ring | Cured. |
| 26 | Same | 1 | F. 64 | Femoral. | Strangulated. | Ligature and excision of sac. | Cured. |
| 27 | Same | 1 | F. 63 | Umbilical. | Could not tolerate pad. Adherent omentum | Suture of ring with silkworm gut | Cured. |
| 28 | Same | 1 | M. 69 | Inguinal | Impossible to retain with truss. | Suture of canal | Cured. |
| 29 | Same | 1 | F. 72 | Inguinal | Hernia enormous. Never retained by truss. Strangulation. | Excision and suture. | Cured. |
| 30 | Same | 1 | F. 72 | Femoral. | Adherent omentum | Excision and suture. | Cured. |
| 31 | Same | 1 | F. 60 | Umbilical | Adherent omentum. Pad not tolerated | Excision and suture. | Cured. |
| 32 | Same | 1 | F. 64 | Femoral. | Strangulated. | Excision and suture. | Cured. |
| 33 | Same | 1 | M. 65 | Inguinal. | Adherent omentum. Pad not tolerated | Excision and suture. | Cured. Slight relapse after two years. |
| 34 | Cases from 34 to 70, inclusive, are from a personal communication from Mr. C. H. Makins, Surgeon to St. Thomas' Hospital, from cases recorded in Hospital Reports from 1880 to 1894, inclusive. | 9 | M. 61 | Large scrotal. | Strangulation | Lig. and ablation of sac; drain | Cure. |
| 35 | | 9 | M. 66 | Inguinal | Strangulation | Ligature and excision; suture. | Recovery. |
| 36 | | 9 | F. 70 | Inguinal | Strangulation | Ligature and excision; suture. | Recovery. |
| 37 | | 9 | M. 80 | Inguinal | Strangulation | Ligature and excision of sac and suture of ring. | Cured. |
| 38 | | 9 | M. 65 | Inguinal | Strangulation | Same as above | Death on 19th day. |
| 39 | | 10 | M. 74 | Inguinal | Strangulation | Same as above | Cured. |
| 40 | | 10 | M. 74 | Inguinal | Strangulation | Ligature and excision of sac. | Died night of operation. |
| 41 | | 10 | M. 84 | Inguinal | Strangulation | Lig. and exc'n of sac; suture. | Died on second day. |
| 42 | | 10 | F. 72 | Femoral. | Strangulation | Ligature and excision of sac. | Cured. |
| 43 | | 10 | F. 68 | Femoral. | Strangulation | Ligature and excision of sac and deep suture | Cured. |
| 44 | | 10 | F. 74 | Femoral. | Strangulation | Same as above | Cured. |
| 45 | | 10 | F. 63 | Femoral. | Strangulation | Ligature and excision. | Died on fourth day. |
| 46 | | 10 | F. 69 | Inguinal | Strangulation | Lig. and exc'n; sut. of canal. | Cured. |
| 47 | | 10 | F. 71 | Umbilical. | Strangulation | Same as above | Died. Collapse. |
| 48 | | 11 | M. 66 | Inguinal | Strangulation | Same as above | Cured. |
| 49 | | 11 | M. 74 | Inguinal | Strangulation | Same as above | Cured. |
| 50 | | 11 | 82 | Inguinal | Strangulation | Same as above | Cured. |
| 51 | | 11 | F. 64 | Femoral. | Strangulation | Same as above | Cured. |
| 52 | | 11 | F. 73 | Femoral. | Strangulation | Ligature and excision. | Died. Gangrene of gut. |
| 53 | | 9 | F. 67 | Femoral. | Strangulation | Lig. and exc'n; sut. of canal. | Cured. |
| 54 | | 12 | M. 61 | Inguinal | Irreducible. | Same as above | Cured. |
| 55 | | 12 | F. 72 | Femoral. | Strangulated. | Same as above | Cured. |
| 56 | | 12 | F. 63 | Femoral. | Strangulated. | Same as above | Cured. |
| 57 | | 12 | M. 72 | Inguinal | Irreducible. | Same as above | Cured. |
| 58 | | 13 | M. 71 | Inguinal | Strangulation | Same as above | Cured. |
| 59 | | 13 | F. 75 | Femoral. | Strangulation | Same as above | Cured. |
| 60 | | 13 | M. 63 | Femoral. | Strangulation | Same as above | Cured. |
| 61 | | 14 | M. 69 | Inguinal | Strangulation | Ligature and excision of sac. | Died on second day. |
| 62 | | 14 | M. 64 | Femoral. | Strangulation | Same as above | Cured. |
| 63 | | 14 | M. 65 | Femoral. | Strangulation | Same as above | Cured. |
| 64 | | 14 | F. 64 | Femoral. | Strangulation | Same as above | Cured. |
| 65 | | 14 | F. 66 | Femoral. | Strangulation | Same as above | Cured. |
| 66 | | 14 | F. 67 | Femoral. | Strangulation | Same as above | Cured. |
| 67 | | 14 | F. 70 | Femoral. | Strangulation | Same as above | Died on third day. |
| 68 | | 14 | 7[illegible] | Femoral. | Strangulation | Same as above | Cured. |
| 69 | | 14 | 73 | Femoral. | Strangulation | Same as above | Died third day; peritonitis. |
| 70 | | 14 | M. 62 | Umbilical. | Strangulation | Excision and suture. | Died 4th day; peritonitis. |
| 71 | Aug. Bioco | 1 | F. 69 | Femoral. | Irreducible for three years. Strangulation | Ligature, excision of sac and drainage | Cure. |
| 72 | Same | 1 | M. 63 | Inguinal | Strangulation | Ligature and excision of sac. | Cure. |
| 73 | Same | 1 | M. 64 | Inguinal | Strangulation | same as above | Cure. |
| 74 | Same | 1 | M. 67 | Inguinal | Suppurative peritonitis. Intestinal perforation. | Ligature, excision of sac and drainage | Death on day of operation. |
| 75 | Same | 15 | M. 79 | Inguinal | Strangulation | Ligature and excision of sac. | Cure. |
| 76 | Same | 15 | M. 63 | Inguinal | Suppurative inflammation of omentum. | Ligature and excision of sac and omentum | Cure. |
| 77 | Same | 15 | M. 64 | Inguinal | Reducible, but could not be retained by truss. | Excision of omentum and sac, ligature | Cure. |
| 78 | Same | 16 | F. 68 | Inguinal | Strangulation | Ligature and excision of sac. | Operation May 9, primary union, death June 1. |
| 79 | Same | 16 | F. 77 | Femoral. | Strangulation | Same as above | Death fourth day. |
| 80 | Same | 16 | F. 68 | Femoral. | Strangulation | Same as above | Death third day. |
| 81 | Arthur T. Barker | 1 | F. 66 | Femoral. | Strangulation | Excision of sac and suture with chromicised catgut | Cure. |
| 82 | Same | 1 | F. 66 | Femoral. | Irreducible. | Same as above | Cure, no recurrence after 2 yrs. |
| 83 | Same | 1 | F. 70 | Femoral. | Strangulation | Same as above | Cure. |
| 84 | Same | 1 | M. 61 | Rt. inguinal. | For radical cure. Hernia enormous; contained cecum, omentum and small intestine. | Bassini's method. | Cure, no recurrence in 2 years. |
| 85 | J. D. Griffith | 1 | F. 62 | Umbilical. | Incarcerated | Excision and suture with silk. | Cure. |

| No. | Operator. | Ref. | Sex and Age. | Kind of Hernia. | Reason for Operation. | Kind of Operation. | Result. |
|---|---|---|---|---|---|---|---|
| 86 | J. D. Griffith | 1 | F. 65 | Umbilical | Incarcerated | Excision and suture with silk. | Cure. |
| 87 | Same | 1 | F. 61 | Femoral | strangulation | Bishop's. | Cure. |
| 88 | Same | 1 | F. 68 | Femoral | Strangulation | Bishop's. | Cure. |
| 89 | Same | 1 | F. 60 | Femoral | Strangulation | Bishop's | Cure. |
| 90 | Joseph Ransohoff | 1 | F. 62 | Umbilical | For radical cure | Exc'n and silver wire suture | Cure. |
| 91 | Same | 1 | F. 60 | Umbilical | For radical cure | Same as above | Cure. |
| 92 | Same | 1 | F. 67 | Umbilical | Strangulated. | Same as above | Recovered. |
| 93 | Same | 1 | M. 70 | Inguinal | Strangulated. | Ligature and excision of sac | Patient an alcoholic, died in two weeks. |
| 94 | Same | 1 | M. 61 | Inguinal | For radical cure | Ligature and excision of sac, suture of canal. | Cure. |
| 95 | Same | 1 | M. 63 | Inguinal | For radical cure | Same as above | Cure. |
| 96 | Same | 1 | F. 60 | Femoral | Strangulation | Same as above | Cure. |
| 97 | W. W. Keen | 17 | F. 60 | Fem.—Littré | Strangulation | Laparotomy; bowel released by traction from within. | Recovery. |
| 98 | Same | 1 | F. 65 | Inguinal | For radical cure | McBurney's | Cure. |
| 99 | Same | 1 | M. 65 | Femoral | Strangulation | Herniotomy; suture. | Died. |
| 100 | Same | 1 | F. 77 | Femoral | Strangulation | Same as above | Recovery. |
| 101 | A. E. Rockey | 18 | M. 61 | Inguinal | Could not manage truss | Marcy's | Cure. |
| 102 | Same | 18 | F. 65 | Umbilical | Adherent omentum | Excision and wire suture. | Cure. |
| 103 | Same | 18 | M. 72 | Inguinal | Irreducible | Bassini's | Cure. |
| 104 | H. O. Marcy | 1 | F. 63 | Left inguinal. | Strangulated. | First case where closure was made with buried animal sutures; catgut; Lister dressing; carb. plaster | Union primary, remained perfectly cured until death, six years after. |
| 105 | Same | 1 | F. 67 | Left inguinal. | Uncontrollable by truss. Deliberately decided upon for cure. | Closed with buried sutures. | Union primary and cure remains perfect. |
| 106 | Same | 1 | F. 68 | Rt. inguinal | Same patient (105) demanded operation for smaller hernia | Marcy's | Union primary and cure remains perfect. |
| 107 | Same | 1 | F. 62 | Umbilical | Large. Strangulated | Closed with catgut buried sutures | Union primary, cure perfect, think still living. |
| 108 | Same | 1 | F. 63 | Umbilical | Strangulated. | Resected 7 inches of necrosed small intestine; sutur'd with caribou tendon | Death some days after from exhaustion; primary union, intestines united without peritonitis, specimen held column of water without leakage. |
| 109 | Same | 1 | M. 70 | Enormous scr. left inguinal. | Strangulated. | Removed sac by suturing at base and closing with kangaroo tendon suture; collodion seal. | Recovery, union primary, cure permanent. |
| 110 | Same | 1 | F. 66 | Rt. Femoral | Strangulated. | Closed with tendon sutures. | Union primary and permanent |
| 111 | Same | 1 | F. 62 | Rt. Inguinal | Non-strangulated | Removed large omental mass, closed wound without drainage, sealed with collodion. | Union primary and permanent |
| 112 | Same | 1 | F. 62 | Left inguinal. | Non-strangulated | Same as above | Union primary, cure perman't. |
| 113 | Same | 1 | M. 65 | Left inguinal. | Uncontrollable by truss | Marcy's | Union primary, cure perman't. |
| 114 | Same | 1 | F. 67 | Large ventral. | After a suppurating Alexander's operation. | Resected and closed in layers of tendon suture; sealed | Union primary, cure perfect. |
| 115 | Same | 1 | M. 65 | L'rge l'ft scr't. | For radical cure | Marcy's | Union primary, result perm'nt |
| 116 | Same | 1 | M. 83 | Left scrotal | Strangulated, containing twelve inches of large intestine. | Marcy's | Union primary, result permanent until death 3 yrs. later. |
| 117 | Same | 1 | F. 61 | Large umb'cal | Irreducible | Resected large mass omentum and elliptical portion about umbilicus; joined with layers of tendon. | Union primary and result permanent. |
| 118 | Same | 1 | M. 65 | Rt. inguinal | For radical cure | Marcy's | Union primary, result perm'nt. |
| 119 | Same | 1 | M. 65 | Left inguinal. | For radical cure | Marcy's | Union primary, result permanent, cord a long time tender |
| 120 | Same | 1 | F. 62 | Large umb'cal | Enormously fat woman. Uncontrollable | Resected and removed large mass of adherent omentum; closed in layers with tendon sutures; sealed | Union primary, result perfect. |
| 121 | Same | 1 | F. 65 | Left femoral | Strangulated. | Closed in layers and sealed. | Union primary, result perm'nt. |
| 122 | Same | 1 | F. 70 | Left femoral | Strangulated. | Closed and sealed. | Union primary, result perm'nt. |
| 123 | Same | 1 | F. 63 | Left inguinal. | Uncontrollable. | Marcy's | Union primary, lost sight of. |
| 124 | Same | 1 | F. 78 | Rt. femoral | Strangulated five days. | Resected, closed and sealed. | Union primary, result permanent, living at date. |
| 125 | Same | 1 | M. 62 | Rt. inguinal | For radical cure | Closed and sealed | Union primary, result permanent, died in 1895. |
| 126 | Same | 1 | M. 67 | Enormous rgt. scrotal. | Old congenital. Uncontrollable by supports. | Large mass of omentum adherent to testicle; testicle diseased and removed | Union primary and permanent |
| 127 | Same | 1 | M. 71 | Large right scrotal. | Uncontrollable. | Testicle diseased; removed. | Union primary and result permanent. |
| 128 | Same | 1 | M. 61 | Rt. inguinal | For radical cure | Marcy's | Union primary and result to date permanent. |
| 129 | Same | 1 | M. 61 | Left inguinal. | For radical cure | Marcy's | Same as above. |
| 130 | Same | 1 | F. 62 | Rt. femoral | Strangulated. | Sealed | Union primary, died of pneumonia some weeks later. |
| 131 | Same | 1 | M. 61 | Rt. inguinal | Very imperfectly retained by truss. | Closed and sealed | Union primary. |
| 132 | Same | 1 | M. 61 | Left inguinal. | Very imperfectly retained by truss. | Closed and sealed | Union primary, 9 months later slight yielding of internal ring. |
| 133 | Same | 1 | M. 61 | Large rt. ing | Irreducible | Closed and sealed | Wound infect'd and superficial fatty structures sloughed, union strong at date. |
| 134 | E. J. Senn | 20 | M. 67 | Inguinal | Difficult retention and annoying | Bassini's modified. | Cure. |
| 135 | W. T. Bull | 21 | M. 67 | Left inguinal. | Irreducible | Czerny's | Wound healing, suppuration, relapse in one month. |
| 136 | Same | 21 | F. 60 | Umbilical | Sac contained omentum, colon and loop of small intestine. Irreducible. | Omentum resected; wound closed in layers with kangaroo tendon | Primary union, except small stitch-hole abscess. |
| 137 | Same | 21 | M. 63 | Rt. femoral | Irreducible | Omentum reduced; ligation of neck of sac; ring not sutured | Primary union. |
| 138 | Same | 21 | M. 61 | Inguinal | Strangulated. | Same as above | Death on tenth day, autopsy showed 1½ ft. of ileum nearly black, no perforation, fatty heart, tubercular deposits in lung. |
| 139 | Same | 21 | M. 63 | Dbl. inguinal. | For radical cure | Canal sutured with kangaroo tendon | Well eleven months later, no relapse. |
| 140 | Same | 21 | F. 60 | Rt. inguinal | For radical cure | Bassini's | Primary union. |
| 141 | Same | 21 | M. 62 | Dbl. inguinal. | For radical cure | Double Bassini's. | Primary union. |
| 142 | Same | 21 | M. 72 | Inguinal | Strangulated. | Double Bassini's. | Death 11 hours after operation. |
| 143 | W. B. Coley | 21 | F. 62 | Om'ntl ventr'l | Irreducible. Frequent attacks of incarceration and local peritonitis. Hernia about size of a fist. | Incision of omentum | Primary union, slight relapse about one year later. |
| 144 | Same | 21 | F. 68 | Rt. inguinal | Of many years' duration. Irreducible for six months. Considerable pain | Incision of omentum | Perfect primary union. |

REFERENCE TABLE.

No. 1. Personal communication.
No. 2. Medical News, Philadelphia, 1883, iii, 388.
No. 3. British Medical Journal, 1884, i, 553.
No. 4. British Medical Journal, 1884, i, 813.
No. 5. Medical News, July 5, 1890.
No. 6. Maratime Medical News, Halifax, 1894.
No. 7. Provincial Medical Journal, 1895.
No. 9. St. Thomas Hospital, London, Surgical Report, 1894.
No. 10. St. Thomas Hospital, London, Surgical Report, 1893.
No. 11. St. Thomas Hospital, London, Surgical Report, 1892.
No. 12. St. Thomas Hospital, London, Surgical Report, 1891.
No. 13. St. Thomas Hospital, London, Surgical Report, 1890.
No. 14. St. Thomas Hospital, London, Surgical Report, 1889.
No. 15. Dauret: Thèse de Doctorat, Paris, 1892.
No. 16. Mercredi Medical, Paris, 1893, p. 61.
No. 17. International Medical Magazine, February, 1892.
No. 18. Unpublished.
No. 20. Journal of the American Medical Association, May 2, 1896.
No. 21. Personal communication from Dr. W. B. Coley of New York.

and properly adjust the truss. This may be due to lack of intelligence or to a lowered sensibility. There are many persons whose tactile sense and mechanical ability are poorly developed and it surely does not improve in advanced age. Lack of intelligence in matters of this kind in those otherwise capable may be caused by want of proper instruction and to the confusion brought about by the failure of the many inefficient appliances which fill the markets. Some months ago I was called to attend a man over 70 years of age who was wearing three trusses and a suspensory loosely applied at various points over a large unreduced rupture. An efficient truss was adjusted, he was properly instructed in its use and has since retained his rupture without any great difficulty though not without some inconvenience.

Unfortunately all ruptured persons do not have ready access to skillful surgeons or clinics and truss societies where they have the best attention the world affords to prevent or cure strangulation. These are facilities afforded by large cities and yet the great number of strangulated hernias occurring where they are to be had and the fatal results in the vicinity of immediate assistance, might suggest that additional aid in their prevention would be desirable. I believe that remoteness of the ruptured from skillful surgical aid in the emergency of strangulation should be considered a reason for operating in those cases that both theory and experience have shown to be in such danger.

Lowered sensibility in the parts implicated in a rupture does not necessarily mean a lack of sensitiveness. In both the sensitive and the obtuse there may be an inability to discriminate and it frequently happens that the hernia protrudes and the truss is worn for a time making pressure on the contents at the neck of the sac thus greatly predisposing to strangulation. Liability to protrusion under the truss or to forcing a greater quantity of intestine into the sac from straining incident to enlarged prostate may be another cause of strangulation.

There is no inconsiderable proportion of cases of entero-epiplocele in which the omental portion is irreducible on account of firm incarceration in a pouch which in an early stage in the development of the rupture formed a purely omental hernia, but as the ring increased in size and a larger sac was pushed down from the peritoneum, the intestine was admitted to the upper and larger pouch alongside of the omentum now held securely fast below. There are also others in which the intestine has formed adhesions to the sac wall and are for this reason irreducible. In Bull's table of 134 operations of all ages there were forty-two irreducible. Of a total of 176 cases of irreducible hernia seen at the London Truss Society in the years 1888 to 1890 inclusive twenty-five were in persons over 60 years of age. These hernias it is true may be sometimes held satisfactorily and frequently reduced by the hinged cup truss of Mr. Kindon. On page 221 of Macreadie's Treatise we find the following significant sentence: "A person wearing a hollow truss for irreducible hernia can not be deemed secure, for at any moment a descent of intestine may occur and he may suffer strangulation."

The considerations so far named have been for the safety of the patient but if it can be shown that the danger of operation is not great, are we not justified in taking some risk for his comfort? Inability to bear a sufficient degree of truss pressure to retain the rupture may often be due to poorly fitted appliances. Frequently it is caused by a tenderness and intolerance to pressure in all the tissues. Not only is the pressure of the pad poorly borne but points of counter pressure on the back are much complained of. This is especially true when we have associated an impatient disposition and is aggravated when the extrusive force is increased by chronic cough or enlarged prostate. Under these circumstances the desire of the patient to be rid of the pain, discomfort and annoyance of wearing a truss should surely have some weight in favoring the performance of a radical cure operation provided that it can be done with a reasonable degree of safety.

Permanence of cure is an important question that our inquiries have not entirely answered, for the reason that so many cases are not seen again after immediate recovery. Bishop reports one recurrence in his seven cases, but that was after strangulation. Some of his cases though have been under observation for years and have remained well. Bull reports recurrences when the method was ligation and excision of the sac. But that was in operations done years ago, before Marcy or Bassini's or even Macewen's or Bishop's methods were in vogue. Other things being equal I believe that permanence of cure may be as readily attained after 60 as in younger subjects. Success in this important particular depends on the method employed. The operation, though, must be well done. Slouchy work will not give good results.

From time to time I have tried most of the operations in vogue for the radical cure of hernia.

My conclusions are that Marcy's operation will give the best results in inguinal hernia. When I say Marcy's operation I mean the operation by closing the internal ring under the cord with kangaroo tendon. It is displeasing to me to have this operation called Bassini's because the operator does not happen to use Marcy's needles or cobbler's stitch.

Bassini's operation with silk gives equally good results, but when suppuration does occur, as it has sometimes in my operations and occasionally with others also, then the buried silk proves to be a nuisance by perpetrating a nidus for pus microbes. I believe with absolute care in all points of technique this will be very rare. In femoral hernia Bishop's method will fill the canal easier and firmer than any other method and I always employ it.

In umbilical hernia I believe the buried matrass suture of silver wire will give the best results. The pressure on the closed ring is stronger and more unremitting than in other hernias and the presence of the wire must be a continued benefit.

The prognosis as to recovery is well set forth in my table. Sixty-one cases of operation for radical cure for seasons other than strangulation and but two deaths.

Bull's seven and Le Bec's nine cases seem to have been a matter of serious discouragement to these operators. Bull says in the article already quoted: "This fatal result is worthy of notice in so far as it serves to emphasize my conviction that old and feeble subjects should not be subject to operation in reducible cases."

Le Bec says in his letter: "I dislike to operate for the radical cure of hernia in the aged as it is scarcely necessary in those who do not labor and the results are doubtful." His nine cures to one death, and that from pneumonia fourteen days after the operation, the peritoneum being normal, should be regarded more favorably.

Mr. Edmund Owen says "Age is an indefinite term and no barrier to the performance of an otherwise successful operation."

N. Senn says: "I have operated on a number of persons over 60 years of age for radical cure of hernia, usually after operation for strangulation. Age did not seem to interfere with a good result. The last patient was 78 years old. Strangulation of sigmoid flexure. Complete recovery in four weeks."

In reviewing the table and giving attention especially to the experience of H. O. Marcy, G. Stanmore Bishop, W. T. Bull, Le Bec, Arthur T. Barker, Aug. Broca, J. D. Griffith, W. W. Keen and Jos. Ransohoff, it would seem to me that precedent was established and prognosis sufficiently favorable to warrant us in recommending the operation to the aged in suitable cases as a matter of increased safety and comfort to those in whom reduction is impossible or retention difficult.

NOTE.—Recent experience with formalin catgut leads me to believe that it may entirely supplant kangaroo tendons in hernia operations. An autopsy one month after an exploratory laparotomy in a case of cancer of the stomach, where the peritoneum had been closed with a continuous suture of fine formalin catgut, showed it still firm enough to maintain support, but undergoing absorption. Previous to the appearance of Professor Senn's article (See JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION for Dec. 12, 1896, p. 1219) I had exposed catgut for one week, instead of twenty-four hours, to the formalin solution. Before boiling it is brittle, but after boiling has great strength. It requires a longer time for absorption, as I have proved in frequent trials of both methods.

## ABSCESS OF THE SEPTUM NARIUM.

BY W. E. CASSELBERRY, M.D.

CHICAGO, ILL.

Chairman of the Section on Laryngology and Otology of the American Medical Association; Professor of Laryngology and Rhinology in Northwestern University, Medical School; Laryngologist and Rhinologist to St. Luke's Hospital; Laryngologist to Wesley Hospital, etc.

The condition which, for the sake of simplicity in nomenclature is designated "Abscess of the Septum," only occasionally presents the typical characteristics of acute circumscribed suppuration. When caused by traumatism the first stage may be an effusion of blood beneath the muco-perichondrium of the cartilaginous septum which is termed "Hematoma of the Septum." In time the blood degenerates, perhaps becomes infected by pyogenic microörganisms and changes to a brownish yellow fluid which when evacuated appears neither like blood nor typical pus. In this state it has been called "Cold Abscess," and again when it does originate without traumatism and runs an acute course with pain, fever and obstructive swelling terminating in ideal suppuration, it has been spoken of as "Acute Perichondritis." Jurasz[1] has described a form in which the contained fluid is at first serous, termed serous perichondritis. Some sort of abscess is the culminating stage of all these conditions.

Although it might be possible for the bony portions to be affected, the usual seat of the disease is the cartilaginous part of the septum and it may be either unilateral or bilateral.

*Etiology.*—The most frequent cause is believed to be traumatism, e.g., blows or falls upon the nose, yet in many cases it is impossible to establish this relationship; slight contusions, readily forgotten, can determine a hematoma of the septum. This may run an insidious course, endure for days or weeks and undergo spontaneous absorption, having been little noticed, but in other instances the blood changes to sanguinolent pus and the cartilage itself disintegrates, the contents being retained by the bulging muco-perichondrium. Pyogenic microörganisms could excite suppuration in these and also in so-called idiopathic cases by gaining an entrance through excoriations which frequent these surfaces. The disease may occur also during the course of typhoid fever or smallpox, and Scheck calls attention to the frequency with which facial erysipelas proceeds from abrasions upon the septum and infers that abscess of the septum can be caused by infection by the streptococcus erysipelatis. In many cases still it is quite impossible to assign any definite cause.

This was true in the following case which is a typical example of the variety termed cold abscess.

*Case 1.*—Master G., aged 16 years; while away from home at school began to suffer from nasal obstruction which he attributed to an acute exacerbation of his customary "catarrh." No history of traumatism could be elicited, the disease having seemingly commenced as a cold and continued several weeks before it received serious consideration. But nasal obstruction, and swelling within and without the nose gradually grew so serious that he was sent home where he was confined to his bed, supposed to be suffering from asthma. On examination the diagnosis was at once apparent, for from each side of the septum bulged a fluctuating tumor which completely blocked both nostrils. The enveloping mucosa was unbroken, somewhat inflamed, and the nose generally reddened and edematous. A brownish yellow liquid was withdrawn by a hypodermic syringe, and this was followed by a free incision toward the base of one side and gentle curetting of the cavity. The central portion of the cartilage had liquified, but it redeveloped from the muco-perichondrium and perfect recovery ensued.

*Symptoms.*—In case of the transition of a hematoma into an abscess, the disease may manifest itself either quite insidiously or the suppurative change may ensue quickly and be associated with sneezing, nasal irritation and slight fever. In either event the salient symptom ultimately complained of will be obstruction to nasal respiration together with the discomforts of mouth breathing.

When the abscess arises in the form and in conse-

[1] Journal of Laryngology, etc., Nov. 1896, p. 266.

quence of acute perichondritis it is ushered in during a few days by symptoms indicating a high degree of inflammation, *e. g.*, chill, pronounced fever, pain, swelling and redness of the whole organ. Spontaneous rupture is more apt to occur quickly in this than in the former type, although it may be much delayed after the subsidence of the inflammatory symptoms, leaving again nasal obstruction as the salient symptom.

*Case 2* exemplifies the latter type.—Mr. B., aged 26 years; thought he had contracted a severe "cold in the head," the condition commencing with chilly sensations followed by headache, fever, local sensitiveness and redness extending to the bridge of the nose. These symptoms gradually subsided but were replaced by nasal obstruction and what he now supposed was chronic nasal catarrh. The examination was not made till the third week when a fluctuating tumor was observed to bulge from each side of the septum. Typical pus was evacuated by an incision and the cavity curetted. The destroyed central part of the cartilage ultimately redeveloped without deformity. He positively denied the least probability of traumatism as a cause.

*Diagnosis.*—By simple inspection with the head tilted backward, the semicircular tumor may be seen bulging from one or both sides of the septum. Palpation by a probe will cause deep pitting or even fluctuation, and aspiration by a hypodermic needle will provide a sample of the contents. It may thus be readily distinguished from polypus for which it is most commonly mistaken by novices, but which occurs but rarely in this situation, and also from syphilitic gumma which commonly develops at just this spot. I have seen one case of gumma in which the central part had liquified before the occurrence of superficial ulceration, in which the diagnosis would have been impossible, had not other syphilitic signs been present.

*Prognosis.*—If recognized reasonably early and the abscess evacuated, the prognosis is very good. Notwithstanding complete liquefaction of the cartilage itself, if the muco-perichondrium be preserved, another cartilaginous septum will develop and this usually without deformity. However, if the disease be unrecognized or if the inflammatory action extend to the antero-superior border of the septum, the line of junction of the septum with the lateral cartilage and nasal bones, softening and depression of these which constitute the dorsum of the nose will result. Apart from this "saddle-back" deformity or in conjunction with it, perforation of the septum can also ensue.

*Treatment.*—When the initial stage is a hematoma cold applications would be suitable. In any event as soon as pus is present a rather free incision should be made low down or one side and the contents expressed. This should be reopened daily with a probe until the cavity has been effaced. It is probably not necessary to curette, wash out or pack the cavity with gauze although one or all of these may seem desirable at times.

## FIBROUS NASAL POLYPUS.

BY D. R. SILVER, M.D.
SIDNEY, OHIO.

As a contribution to our knowledge of nasal polypi, I venture to report this case, which, in one respect at least, may be unique. The growth developed in a boy, 12 years old. He had the characteristic mouth-breathing at all times on account of the complete closure of the posterior nares. On inspection, a tumor the size of a man's thumb could be seen in the naso-pharynx below the line of the soft palate. To the touch it was hard and seemed firmly attached; so firmly, indeed, that to remove it by twisting was out of the question. Its point of attachment could not be made out. Its large size made the passage of anything through either nostril nearly impossible. As a preliminary step, a threaded needle was passed through the lower portion of the growth so that it could be pulled well down and forward, after which it was found possible to pass a small rubber catheter, to which was attached a string, through the right nostril and out of the mouth, as in the operation for closing the posterior nares. By means of the string a heavy silver wire, doubled, was drawn through and slipped over the tumor, fortunately encircling the point of attachment, which could hardly be called a pedicle, since it was found to be nearly as large as any other portion of the neoplasm, and fully three-fourths of an inch in diameter. The wire attached to a strong screw cut its way through in an hour.

It proved to be a three-lobed affair, very hard and fibrous, and was drawn out through the mouth by means of the thread which transfixed the growth at its lower end. Its dimensions were $2\frac{3}{4}$ by $1\frac{1}{2}$ by $\frac{3}{4}$ inches. The pain produced by the constricting wire was considerable, but there was no hemorrhage to occasion alarm. Notwithstanding the fact that the point of attachment was well cauterized a large mucous polypus sprang up in a few weeks. This was removed by twisting and did not return. The specialist trained in the manipulations of rhinologic work may not find the removal of nasal and post-nasal polypi very difficult. But when these growths are very large or very small the general practitioner finds their management quite perplexing. For this reason the subjects of nasal polypi furnish a large contingent of the army of victims who fall an easy prey to the catarrh "specialist." Nostrums, whose only recommendation is their nastiness, are bought and used for years by persons whose rather fashionable complaint could be removed by a twist of the forceps.

## HEMORRHAGE FROM THE LARYNX, FOLLOWING AN ATTACK OF MEASLES, IN AN ADULT.

Read before the Section of Otology and Laryngology of the College of Physicians, Philadelphia, Pa., March 3, 1896.

BY FRANK WOODBURY, M.D.
Instructor in Laryngology in the Philadelphia Polyclinic; Attending Physician to the Medico-Chirurgical Hospital, etc.
PHILADELPHIA, PA.

On January 24, Martin S., 27 years of age, born in Ireland, a laborer by occupation, presented himself at the laryngologic dispensary of the Polyclinic Hospital with an acute inflammation of the fauces and pharynx and with almost extinguished voice, requiring considerable effort in speaking. He gave the following history: About nine weeks previous, or about the first of December, four sailors were admitted to the Naval Hospital suffering with measles. Three cases developed subsequently among the employes of the institution, where he was engaged as a fireman, and all the cases recovered. The patient was taken sick January 3, or about two weeks after the first patients were convalescent, and had been allowed to go around the grounds. He said that he had fever, eruption, conjunctivitis, cough, and subsequently there was much desquamation, especially from his face

and hands. The cough continued and was attended by hoarseness and free expectoration. He was confined to bed for only one week, but had been feeling poorly ever since. The notes in the case book state that three days before the visit to the hospital, he woke up in the morning feeling his throat obstructed and, on clearing his throat, expectorated mucus and blood, followed by a small quantity of pure blood. He stated further that he had spit blood each morning since, but none during the day. He indicates a spot in the trachea, just below the larynx, as the place which he considers the source of the hemorrhage, as he has more or less pain in it all the time. He has also sore throat and pain in speaking and in swallowing.

On examination, the fauces, soft palate and uvula and part of the pharynx were found to be intensely hyperemic and his throat was so irritable that it was impossible to make a complete laryngoscopic examination at this time or on several subsequent visits. On February 5 the throat was so much better that an examination was made, when hyperemia of the larynx and vocal bands was recognized but no ulceration was found. There has been no hemorrhage since his first visit and his general condition has steadily improved.

The treatment was by inhalations of benzoinated steam, a gargle of chlorate of potassium and rhus glabra, with the internal administration of muriate of ammonia (gr. x every three hours) and milk punch. he was instructed to use his voice as little as possible and to remain in the house the greater part of the day.

## SHOULD CULTURES FOR BACTERIOLOGIC EXAMINATIONS BE TAKEN FROM THE NASAL CHAMBERS AS WELL AS FROM THE THROAT IN CASES OF SUSPECTED DIPHTHERIA.

Read before the Section of Otology and Laryngology of the College of Physicians, Philadelphia, Pa.

BY E. LARUE VANSANT, M.D.

Professor of Diseases of the Throat and Nose, Philadelphia Polyclinic; Laryngologist and Aurist to the Howard Hospital; Fellow of the College of Physicians, Philadelphia; Fellow of the American Laryngological, Rhinological and Otological Society.

PHILADELPHIA, PA.

Recently I commenced to take cultures for bacteriologic examination from the nasal chambers as well as from the membranous deposits in the throat in cases of suspected diphtheria. The nasal cultures were made by pushing the swab back to the posterior portion of the nasal chambers, but not going through to the pharynx. Those from the throat were made by rubbing the swab over the surface of the membranes before any remedial application had been made.

In the following two instances the bacteriologic examination showed diphtheria bacilli in the cultures from the nose, and gave negative results in those from the throat. The bacteriologic examinations were made by Dr. W. J. Gillespie, to whom I acknowledge my indebtedness:

*Case 1.*—Mr. M. H., age 46 years, seen Nov. 25, 1896, has a history of several attacks of quinsy during his life. His present illness dates from a chill three days ago; since then he has had fever, chilliness and exhaustion, pain on swallowing, with swelling of the left side of his throat. Examination showed the left tonsil swollen and hypertrophied, the peri-tonsillar tissue of the same side greatly swollen. A velvety, dirty yellowish-white membrane covered the left tonsil and extended over the palatine arches. Upon removing a portion of this membrane a granular, slightly bleeding surface was seen beneath. There was no membrane visible in the vault of the pharynx or nose. The nasal septum was deflected to the left and the nasal chambers contained considerable muco-purulent secretion. The bacteriologic report was: for the nose, numerous diphtheria bacilli; for the throat, large cocci, nnmerous spores and long slender bacilli, no diphtheria bacilli.

*Case 2.*—I. L., aged 18 years; seen Dec. 2, 1896. Has been in good health until two days ago, since then has suffered from chilliness, fever and sore throat. He comes from a neighborhood largely infected by diphtheria. Examination showed both tonsils swollen, with an extensive yellowish-white exudation from the crypts. This exudation in several spots spread over portions of the tonsils. The pharynx was dry and glazed with a whitish membranous appearance at the vault. Nasal inspection revealed an advanced atrophic rhinitis, but no membranous deposit. Bacteriologic report: The culture from the nose contains a few diphtheria bacilli; that from the throat contains numerous organisms resembling the bacilli subtilis, no diphtheria bacilli.

It is a well-known fact that it is not infrequent to receive negative results from bacteriologic examinations in clinically well marked cases of diphtheria. Thus, Dr. B. Meade Bolton, in an abstract from the first annual report, bacteriologic laboratory, Bureau of Health, Philadelphia, Pa., read before the Philadelphia County Medical Society, June 10, 1896, states that in 557 cases diagnosticated as diphtheria, bacteriologic examination showed the presence of diphtheria bacilli in 507, or 90.2 per cent.

Here, then, is nearly 10 per cent. of negative bacteriologic examinations in 557 cases where positive diagnosis of diphtheria had been made. There can be no doubt but that carelessly made cultures would account for some of these negative results. Still, when we consider that the membrane in the throat in diphtheria quickly becomes loaded with many other bacteria found in the mouth, and further that the diphtheria bacilli are rather under the membrane than in it, we can readily see how a carefully made culture may have the typical growth of the diphtheria bacilli obscured by that of foreign germs, and how a culture taken from the surface of a diphtheritic membrane may contain only partially devitalized diphtheria bacilli, incapable of giving a good culture for bacteriologic examination. The normal nasal secretion, however, seems to retard the formation of the membranes; cultures, therefore, taken from the nasal chambers may in some instances give more accurate results than those taken from the throat.

The embarrassment to the attending physician caused by receiving a negative bacteriologic report in cases clinically so well marked as to cause him to make a positive diagnosis of diphtheria and the lessened carefulness and insufficient isolation on the part of the patient after receiving such a report, should certainly cause us to use every means to insure accurate results. I, therefore, would suggest that in all cases of suspected diphtheria, cultures should be taken from the nasal chambers as well as from the site of the membranes in the throat.

## INFANT MORTALITY DURING LABOR, AND ITS PREVENTION.

BY Z. LINCOLN WHITMIRE, M.L., M.D.

URBANA, ILL.

*(Continued from page 294.)*

Uterine inertia.—This brings us to uterine inertia, which is a peculiarity the uterus has sometimes of suspending operations and refusing to further assist in the delivery of the child. It most commonly occurs in protracted cases, accompanied by great prostration in the patient, and coming on near the

termination of labor, though it may occur at any time, it is more apt to occur at a time when its presence most endangers the child's life, as when the head or cord or both are passing over the perineum and are undergoing great compression irrespective of the uterine contractions; so that for the child to be left in this position would be certain death if continued for any great length of time.

Uterine inertia is also apt to appear in excessively painful cases and in those in which the patient is weak and emaciated, a condition resulting from disease or from an ever-present dread of the approaching and inevitable ordeal of labor. The chief consolation to the physician is that this trouble may be anticipated and often prevented, and when the above-mentioned indications are present the patient should be put on a tonic and alterative treatment at once. If we see her for the first time in this condition when we are called to attend her through confinement, we have nothing left to do but to fortify her against the probable results by a judicious administration of stimulants. But in cases of high nervous tension, sedatives may be indicated. Sometimes it happens that her health is in a perfect condition, but circumstances are such that the case bids fair to be a long and tedious one; as, for instance, when the membrane has ruptured early or in a case of breech presentation, and particularly when both these conditions are present. In such cases also we should fortify her against the probable occurrence of uterine inertia.

Unless properly attended to, uterine inertia is apt to prove fatal under the following conditions: 1, in a breech presentation when the body is born and the head and cord are passing together over the perineum; 2, in a head presentation when the head has reached the outlet and the crown is exposed to the cold air. In both these cases the child's life may be lost by the head being too long in this contracted condition while passing through the outlet; and also the cold air upon the exposed part may cause the child to inhale sufficient mucus to strangle it after the cord is tied and the child is dependent upon its lungs for oxygen. In a breech presentation the cause of death is the compression of the cord, and it will be fully discussed under the head of breech presentation. When uterine inertia occurs under either of these conditions, a prompt delivery is necessary to save the child. Forceps must be used, if indicated, where there is time to apply them.

Ante-partum hour-glass contraction of the uterus is not an uncommon complication to labor. It is usually caused by a premature rupture of the membrane, for when the amniotic fluid escapes the uterus has to contract upon the irregular surface of the child's body. This causes an uneven distribution of the uterine force, and the uneven contractions resulting are apt to assume the hour-glass variety. Under such circumstances the child can not pass out of the uterus, and unless the pressure is relieved or normally applied the child's life will be lost. For the purpose of stopping this abnormal and dangerous condition such remedies are indicated that tend to relax the muscles of the uterus. A dose of ipecacuanha is very good for this, but a trifle slow in its action. A hypodermic injection of morphin sulphate or a very small injection of apomorphia are also good remedies, but should be given with care. Inhalations of chloroform, however, are perhaps the most commonly used and are far the safest. Whatever is determined upon must be administered promptly and with due consideration for the patient and for the circumstances attending upon her case. After the contractions have assumed their normal state, if there is a disposition on their part to return to the abnormal type, the physician may use as prophylactics the remedies he formerly used as a cure, though in most cases he will find that an immediate delivery is far preferable.

Displacement of the uterus.—Of the various displacements of the uterus, anterior displacement occurs most often in pregnant women; and a description of it will answer for a description of each of the others—except as to the location of the os and the fundus. The principal cause of anterior displacement of a gravid uterus is the weakness of the walls of the abdomen and their inability to support the weight of the uterus. It tips forward therefore and distends the abdomen, while the os is tipped backward and out of sight, as an examination of the vagina will disclose. It is quite evident that while the os is in this hidden position it will be impossible for the uterus to expel the child, and the pressure is sure to either rupture the uterine wall or kill the child, or both. To prevent such a calamity it is the duty of the physician to correct the displacement and to maintain the uterus in its normal position till labor has progressed far enough to prevent a recurrence of the trouble. This is easily done. To replace the uterus, govern the fundus with one hand, from without the abdominal wall or from within the rectum, according to the direction of the displacement, and with the other hand in the vagina, guide the cervix with your fingers. After it has been replaced it can be kept in its proper position by bandages around the body of the woman or by her assuming an appropriate position. It is then best to hasten delivery; but do not use forceps unless especially indicated.

Premature rupture of the membrane is next in order in this discussion. This complication may happen at any time during gestation, though it rarely happens before the fifth month. When the membrane ruptures before the last two weeks of gestation, the length of time thereafter till the occurrence of premature labor is proportional to the amount of amniotic fluid that escapes. This rule applies only to those cases where the membrane has been ruptured by accident, or ruptured intentionally. When it has been ruptured by the expulsive force of the uterus in trying to expel the child the rule does not apply; only applying where the rupture of the membrane produces the pains.

The normal time for the membrane to rupture is after the os has been expanded and dilatation is almost, if not quite, complete. The premature rupturing of the membrane with which the physician has to contend, and which comes under this class of complications, is that in which the membrane ruptures near the completion of gestation and before the os is dilated. The principle use of the unbroken membrane in labor is the service which the sack performs as an entering wedge in dilating the os; a use for which its conical shape is particularly adapted. When it breaks, its conical shape is lost. But the breaking of the membrane does not always mean the loss of the fluid, for the presenting part sometimes hinders the escape of the fluid that is behind it; hence the bad results that sometimes follow it are prevented; for instance, ante-partum hourglass contraction of the uterus. It may be stated as a rule

that the earlier the membrane ruptures the more fluid escapes and the more serious are the resulting troubles.

When a child is born at full term and the fluid has escaped several weeks previous to the delivery it is commonly called a dry birth or a dry labor; and such a labor is usually a slow and tedious one. The first stage is slow because (in the absence of the conical-shaped sack) the os can not easily be dilated by the blunt skull or flabby and yielding breech; while the rest of the labor is retarded by the uneven distribution of the uterine force, due to the uterus having to contract upon the irregular surfaces of the child's body. This slowness subjects the child to the pressure a long time, and may of itself be the cause of the child's death. This is particularly true when the head is passing over the perineum, where it undergoes great contraction. The uneven distribution of the uterine force may result in ante-partum hourglass contraction, which has been discussed.

As mentioned above, the cases in which the membrane ruptures early in confinement are slow and tedious and especially so when nearly, if not quite, all the fluid has escaped; but, nevertheless, they should be allowed to take their course and should not be interfered with till it is seen that the life of the child is in danger. In that case delivery must be hastened as much as is consistent with existing circumstances, but always bearing in mind that the forceps must not be used until they are indicated.

In the second class of complications, those located in the cord and placenta, there are five kinds, as follows:

Short cord.—By this term is meant a cord that becomes taut before the child is delivered. It may occur in several ways, of which the two main ones are: 1, its entire length may be too short; 2, its shortness may be acquired. Examples of the second may be found in cases where the cord is wrapped around some part of the child a sufficient number of times to make it too short, or where the cord is tied in knots enough to produce the same effect. The cases are very rare in which the cord is naturally too short, but when such a case does occur it is a most difficult one to handle. The diagnosis of a short cord is not very easy, and on a correct diagnosis depends the success of the delivery. When the child descends during a pain and then goes back with a jerk, and keeps up this by-play without any ground being gained, one may be fairly certain that he has a case of short cord to contend with and should proceed at once to determine the cause of shortening. This can usually be done by inserting the hand past the presenting part and feeling carefully with the fingers to determine if there are any knots in the cord or if it is wound around any part of the child; one of which conditions will be found, as a rule, to cause the shortening of the cord. If these are excluded, then the only conclusion remaining will be that the cord is naturally too short.

The dangers from a cord that is naturally too short are, that it may break or that the placenta may be torn off before the child is in a position to breathe, or before the cord can be tied. Before the child can be born the cord must be divided or the placenta must be separated from the uterus; hence it is the duty of the physician to strive to have the child as nearly delivered as possible before that time, in order that no time may be lost in completing the delivery and ligating the cord, and he should also cut the cord, if possible, rather than allow it to break wherever it may happen to, or to allow the placenta to be torn off. The cord will stand a great amount of tension before it breaks, and may be stretched to nearly five-fourths its original length. However, stretching the cord in utero has its dangers. An umbilical hernia may be produced, and in some cases it may retard the circulation sufficiently to asphyxiate the child. The umbilical hernia may be prevented if the hand can be placed inside the uterus so as to grasp the child by the abdomen and allow the cord to pass between the fingers. This is impossible with a head presentation, and can rarely be accomplished when the breech presents.

When the shortness of the cord is caused by its being wound about some part of the child or from its being tied in one or more knots (though it may not be naturally too short to allow the child to be delivered) the dangers are the same as those above mentioned, but the danger of stopping the circulation is greater. These cases will be discussed separately.

*(To be continued.)*

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## SURGERY ONE HUNDRED YEARS AGO.

AN HISTORICAL STUDY

BY DR. GEORGE FISCHER.

DEDICATED TO THE GERMAN SURGICAL ASSOCIATION.

TRANSLATED FOR THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION BY CARL H. VON KLEIN, A.M., M.D.

### CHAPTER I.—DOCTOR AND BARBER.

Social relations in the first half of this century; Prejudice; Physician's dress; Family physicians; How soon can one become a great and renowned physician? Education of physicians; Dissensions in consultations; Title; Drinking, physician's income; Beard and barber; Lepers and bathers; Education of the barber-surgeon (des Wundarztes); His social position; Country barber-surgeons; Consultations between physicians and surgeons; Various classifications; Surgical fees; Separation of surgery from medicine; Extinction of barber-trust.

In the eighteenth century family life among the Germans was very rigid. Housekeeping was recognized as the highest destiny for the wife and daughters and the simplest as well as the poorest homes were kept in the best of order. The husband demanded respectful obedience from his wife and children; even the brothers exercised a certain amount of superiority over their sisters. There existed but little general culture in these homes, but plenty of mother wit and wholesome cheerfulness. On holidays, the wealthy citizen appeared in a velvet coat, richly embroidered in gold and silver, broad cuffs and fine lace jabots; and shoes and silk stockings were the correct style in ladies' company. Father and son carried a sword at the side. The apparel worn by the women resembled the fashions of the present day; the hair was dressed high on top of the head, adorned with ribbons and flowers; the heels on the shoes were very high, whalebone corsets which compressed the waist and forced the bosom together were worn, and large hoopskirts and trains. The faces were painted, tout comme chez nous; there are only the little beauty spots of court-plaster lacking on the cheeks and chin of our beautiful women. A strict formality controlled all social intercourse. Congratulations and compliments were so rigidily regulated, that with the numerous little rules of propriety the entire intercourse maintained its unchangeable solidity. No woman was allowed to attend a concert or theater without an escort, nor to go promenading;

even on her way to the church or store she had to be accompanied by her servant-girl. The German peasant often boisterously scolded about this constrained formality, yet he frequently lacked strength of character and will-power. Money and external honor exercised so great a power that about the year 1750, among the best citizens there was scarcely a single man in Germany who would have refused an anonymous bribe; for example, even Gellert, professor at Leipsic, who served as a model of delicate feeling and unselfishness for his contemporaries, yielded to the temptation. The height of ambition was to obtain a title.

About the close of the seventeenth century the absurd custom of giving mechanics court titles sprung up, and if the rank of the court tailor exceeded that of the court gardener, the latter received the distinction of wearing a sword. These things increased the feeling of inferiority among the poorer middle classes and created in their characters the deference and self-constraint paid to the upper classes. The system of protection flourished. Those who had noted and influential acquaintances were envied; an intercession was demanded from every friend of the family, and to kiss the hand of a patron was deemed good form. On account of this lack of self-consciousness, vanity, on the other hand, grew to such an extent that those without rank, title, or station in life were recklessly thrust aside or spurned. Recognizance by the influential and not merit was brought to account. An enlightened public press and strong public opinion were wanting in the German citizen, and his interests in political economy were at a standstill. Most of the gentry of every city belonged to the learned professions, and the theologians, jurists and physicians represented the culture of the times. Every morning they met at their favorite resort, the apothecary's, for a social chat. While enjoying a glass of aquavit (liquor) here they talked over the news of the day, caring little about the skeletons of sharks, stuffed apes and abortions in alcohol which adorned the tops of the cases. This custom grew so that the Mayor of Hanover (in 1784) prohibited the sale of whisky and liquors at the town apothecary's, because the drug clerks were detained in their work and liable to make mistakes. Only physicians and surgeons were admitted, but no longer than necessary for their usual morning drink. The next important event of the day was the arrival and departure of the mail coach, and when a stranger came to town, what an unusual occurrence! Every two weeks only, in the year 1750, did the mail coach go from Dresden to Berlin. The usual stage coach fairly crept along through the country, there being no highroads built until after the Seven Years' War. Those who had to travel a great distance, generally purchased a conveyance, which was sold at the end of the journey. The fastest horses got over the ground at the rate of five miles a day. (G. Freitag.)

About this time the upper classes began to show an interest in science. The boys collected butterflies and beetles and then mounted them; chemistry, distillation, etc., were pursued with pleasure. Superstition, however, still prevailed among the laity. In the graveyard they imagined they saw ghosts, and old cats they took for witches. In the village of Hechingen, in 1725, the lord high forester offered five florins to every countryman or peasant who delivered any of the evil spirits, dead or living, to him. During a thunder storm the church bells were rung, but this was forbidden in Prussia in 1783; in the Rhenish hamlets, however, this superstitious notion still exists. Throughout Germany, as well as England, bleeding was allowed only on certain days. Crowds of peasants migrated to the cupper, who abused them outrageously. The Greeks and Turks, at that time nearly all having the festering cut on the arm (Fontanelle), had a few incisions made in the vicinity of the ear for the bleeding, after a bandage had been tied around the neck to stop the flow of blood, all on account of a little headache. In Pavia existed the barbarous custom of bringing all the horses into the public square of the church, where one after the other they were bled in honor of the holy Antonius, the father of the monks. Purgatives were taken on certain days, the dog-days being particularly dreaded. The result of the physic depended upon the sign of the zodiac in which the sun chanced to be, but in the fall and spring of the year it was very necessary for the maintenance of good health to cleanse the system thoroughly. It was thought that the blood during the period of menstruation contained poison, so a number of surgeons forbid the use of linen articles belonging to women. Amulets and conjuring were in high favor and served as a cure for dead bones. With the formula "abrakadabra," fever was treated; the bite of a mad dog by the Hubert's key.

If clothes make a man, the German physician's appearance during the middle of the eighteenth century proclaimed him one of the worthiest of men. Imagine him with a wig high in front and falling in curls halfway down the back (allongeperücke) powdered white as snow, with a scarlet red coat embroidered in gold and adorned with a jabot and broad lace cuffs, silk hose, white or black, and with flashing knee and shoe buckles. Under his arm he carried a small black silk chapeaubas and in his hand a large bamboo cane, which was indispensable in supporting his chin when pondering over critical cases. When Frederick William I. condemned the allongeperücke and introduced the braid in the Prussian army on account of its simplicity, the fashion set was soon followed by all the men, even the colleague adopted the plait.

But this mode continued only until the French Revolution, when there was no time for curling and dressing the hair; on the other hand, however, the style of dress-coat worn by the North American ambassador in Paris was adopted. Not every German doctor could, without punishment, cut off his braid to be more comfortable, did he not wish to be decried as a Jacobite by the nobility and lose their patronage. It was evident that the physicians speculated to retain the confidence of the public by means of the changes they made in their apparel. This circumstance was well remembered by Napoleon I., who, when suffering from cancer of the stomach while at St. Helena, not wishing to have two diseases, nature's and the physician's, and refusing every internal remedy, wrote his Italian physician the following: "You know, Doctor, that the science of medicine is nothing more than the art of putting to sleep and soothing the imagination; for this purpose the ancients clothed themselves in long coats and flowing garments, which attracted attention and forcibly impressed the sick; but since this Galenic delusion is out of practice, you no longer exercise your former power over them. Who knows but what I would take you for the god of Health were you to appear suddenly before me, attired in a flowing toga and a large wig with a long braid. Unfortunately you are no more than the god of Remedies." The

position occupied by a physician grew to be a most honorable one. He obtained a certain amount of superiority among the upper classes because they were sadly deficient in the knowledge of sciences, and his importance grew more and more when, in the eighteenth century, the family physician came to occupy the confidential relations to the family formerly held by the minister of religion. Soon the former learned all the weaknesses and secrets of the family, binding him more closely, and the relationship between physician and family was considered a great blessing. Thus during the latter half of the eighteenth century the doctor occupied a position only inferior to the nobility. The State also aimed to elevate the position of the physicians. In 1748 they were ranked between the knights and the nobles. The latter loudly disapproved of this classification, so the emperor settled the matter in favor of the doctors, who of their own accord had expressed their desire not too closely to approach the birthright of the gentry in writing. Joseph II. abolished an old law existing in Galicia, that any nobleman who practiced medicine should be deprived of his rank. Afterward the physicians partially lost their high esteem, principally on account of those who, by means of pride, charlatanerie or grossness, which had become typical of our class, ingeniously tried to force their rank. To attain this end they employed many little devices, for as in all ages the laity judged the physician more from appearances than by his scientific knowledge and talents. He who hastened to a bedside and remained a long time, chatting to the patient and those surrounding him, wrote a new prescription at every visit, bowed low and kissed the hand, was the most highly respected, and as long as there are physicians it will never be otherwise. Even Galen complained that he had noticed many doctors by paying compliments in the morning and attending a social dinner in the evening, rose to the rank of a "Doctor of Fashion."

The layman valued the physician with gray hairs the most, for he reasoned thus: The greater the age the greater the experience; a correct inference, providing he was a capable critic. But if he lacked this talent of observation then his experience was of as little value as an old shepherd dabbling in our science.

In answering the question: How can one soon become a great and noted physician, a fine set of rules for success is found in Gruner's Almanach of 1782, which are as follows:

1. Enjoy as long as possible all pleasures of academic life; study a little of everything and for the rest depend upon your good head and your glib tongue.

2. On your return to the Fatherland be the wiseacre and derive all your wisdom from journals and newspapers.

3. Give your opinion on everything as if you were an adept in the art whether you understand the matter or not.

4. Praise yourself and your merits, your successful cures and operations, on every occasion, especially when meeting those incapable or not desirous of criticising you, and all other know-nothings treat with contempt.

5. Be governed by those who wish you well, flatter them, please them in all respects, and as the occasion demands be most courteous.

6. Don't continue your studies, but all the more find fault with learning, journals and bibliomania.

7. Begin early in the morning to stroll through the streets and so persuade the inexperienced ones to believe you the greatest and busiest physician.

8. Give yourself the appearance of a busy man even if you are doing nothing.

9. Mention with pride the important observations and discoveries you have made to your friends so often until they believe it.

10. Become a naturalist or a researcher of nature, because it is the fashion and purchase an elegant case for natural products filled with all kinds of bric-a-brac.

11. Invest in a splendid library and a fine collection of instruments and prepared articles, anatomic, chemic and pharmaceutic; cause a bust to adorn your entrance and your renown as a collector to be spread everywhere.

12. Become the editor of a journal or paper, otherwise a co-worker. If neither, appoint some one to laud your deeds in them.

13. When attending a social gathering see to it that you are called away several times and after your return remark how great the afflictions of a famous man and physician are.

14. Procure a court title or one of some scientific society. It will insure you respect and a reputation.

15. Strive to gain the patronage of the aristocracy.

16. Meddle in everything, undertake everything and promise everything and, like a man of rank, keep only as much as you can and desire to do.

17. Go on a trip if possible. Knowledge gathered in Paris or Edinburgh is better than German wisdom.

18. Condemn all medical books that do not come from London or Edinburgh and purchase the original copies, even if unintelligible to you. The possession of them looks so very learned.

19. Keep up a correspondence with the learned and employ your money in obtaining patrons and friends.

20. Be a friend of the superficial colleague, of the ministers, the druggists, barbers, and of the midwives; also of the merchant, if he can be of use in attaining your purpose.

21. Be religious and a strict observer of ecclesiastic tenets, if you can thereby add to your reputation and increase your income.

22. Manufacture secret medicines, and effect, like Ailhand, the publication of letters of convalescents who never wrote you any.

23. Write some paradox article, clothed in modern style, if forced to copy from the practice of the ancients, and confirm your work by invented or false observations, regardless of the connoisseur and independent thinker.

24. Marry the daughter of an eminent man (distinguished relatives increase purse and mind) or of a rich man, be he of superior or inferior rank. For money encourages one and occasionally makes fame.

25. Have your photograph taken several times and have steel engravings made, accompanying them by your titles, whether merited or unmerited.

26. Assist wherever you can gain honor, money or reward, unmindful of right or wrong.

27. Make it a point to intertain the public with the latest news, with the introduction of novelties, with modern changes in art, with various rumors, etc., and cause them to feel your great value in diverse ways.

28. Boast of the many professional offers you have received from all parts, and if necessary, have some

relative prepare some plausible papers for the purpose. The following instance of Dr. Faust shows us by what means some of the colleagues sought to draw on the people. When Dr. Faust settled in a village he sent out printed sheets offering his aid to the peasantry. He introduced his circular by: "My dear countrymen! It is well for us to know the man with whom we are to have anything to do, so I say to you that I am a just, good and upright man." Then he advertised that his price for a prescription was only a groschen (about 2½ cents), that the medicines he dispensed could be had at cost price or prepared for a groschen; the real poor would be benefited without paying the groschen. In conclusion the advertisement read: "And now, dear fellow-men, I hope that you will not need my services. But if you do you will find that I am an honest and sensible man. Farewell! Altmorschen, the 6th of November, 1785.—B. C. Faust, Dr."

The number of physicians in the beginning of the century was limited, but greatly increased toward the latter half. This increase was partly caused by the growing dislike for the ministry and the abandonment of many cloisters, and partly by the greater number of public offices being filled by the sons of the nobility, making it difficult for the middle classes to obtain any of these positions. The very easy examinations also contributed thereto. On account of the superfluity of young physicians, no more than six inland candidates were allowed to graduate in Vienna every year (1789). The greater mass of the profession was comparatively ignorant; there were as many titled dabblers as real quacks. Aside from the complaints of the great men, that there were not twenty out of a hundred physicians, who had intelligently read Hippocrates in the original language, and that many had never even seen his works, the studies of the practitioner were at a stand-still. They never changed their views, read nothing, obtained no information on anything and followed their old rut of practice. But a few had such an excessive thirst for knowledge, that they continued their studies while out on the street. Stoll, who had a large practice in Vienna, put several volumes, especially Boerhaave's writings, into his buggy, which he read while driving. No one concerned himself much about literature and the younger physicians knew little of what had been written prior to the beginning of their studies; most of them cured palliatively, not knowing the nature of the disease, its origin, or its symptoms. They had but little knowledge of pharmacology, for many mixtures prescribed decomposed, soured or turned into a poison. These were extremely expensive prescriptions—"but physicians and druggists ought not to foster an unlawful and secret agreement." (Austria, 1872). Hieroglyphics in writing prescriptions were still used, as: ▽ was the sign for water, Φ tr. pur. for saltpetre, Θ )–( ac. crud. for sal-ammoniac, and others. Not until about the end of the century a greater interest was taken in the study of materia medica, as well as a preference shown for the same, and those in possession of many approved prescriptions were thought to have invaluble treasures. The physicians became druggists. An idea of the amount expended for medicines in the various hospitals may be gleaned from the following: In the year 1796, at the clinic in Jena $680 worth of medicines were needed for 540 patients; and for the Kieler Hospital in 1797, the total of the apothecary bill was $711 for 343 patients. On account of their low degree of education, disputes among the physicians were common occurrences. Often these became so heated, that they were discussed in public and the most absurd measures planned to extirpate such an evil. According to the opinion of theologists there was no class of professionals in the whole of Germany who contradicted each other oftener than physicians. Whether they attended the same university, were instructed by the same teachers or learned at the bedside of the same patients, was a matter of indifference to them, but when practicing they met at the home of a patient, the spirit of opposition arose. A code of ethics was not followed by physicians in consultation, for if an improvement resulted in the patient's condition, the consulted physician received the credit, while on the other hand, if the patient died it was considered due to the treatment of the regular doctor. Hence ensued the aversion for consultations among physicians, particularly the older men. If a slight shake of the head was noticed by some member of the family, a little wrinkling of the forehead, or a scarcely perceptible smile on the part of the consulted colleague, then the confidence of the family physician was irrevocably lost; although he may have been incapable of correctly diagnosing the disease in the first acute stages, the nature of the same was readily understood the moment the second physician was called in. There accrued an intolerance of sects and advocates of different methods of practice. If a patient died, the one party cried out that the other had beaten him to death. The animosity toward the learned physician was often vented in such expressions as: "He cured his patients in Greek. . . . they died from the influence of too much Hippocrates," and such. The opinions of others were not tolerated and it was believed that there was only one saving and infallible church of medicine, which was defended with an amount of arrogance and animosity, which had no equal. But systems and hypotheses were subjected to so many sudden changes, that the younger generation seldom held the same opinions as the older, although the difference was often only apparent, not real, being clothed in a different language. In large cities, where many consultations were held, the practitioners made an agreement, something like Molière's axiom: Accordez-moi la purgation, je vous accorderai la saignée. What the family physician prescribed was good and the drift of the whole consultation was that everything was sanctioned in a friendly manner, but silently conditioned to enjoy a similar collegiality, should the case be reversed. He who was not loyal to this party was excluded from the consultation, or a great tumult arose, if it was absolutely demanded. The conduct of physicians toward each other professionally, was not an honorable one, for they were very envious of each other. They could not endure to see the financial conditions of a physician in great demand improve day after day, when they themselves were remaining far behind. Envy combined with an over-estimation of self, made them uncharitable and intolerant, and even if the merits of the more remote were willingly acknowledged. Those of the nearer colleagues were ignored and underrated. The mass of medical students has been without means from the very beginning, which is very detrimental when entering on their practice. In Vienna it was a common occurrence that medical students, in order to live, accepted a position as tutor or steward in some

wealthy family. Maria Theresa decreed that only the most talented of the laity be admitted to the study of medicine. For some time practitioners among the higher classes were honored with titles by the State. Beginning often as private surgeon, they soon advanced to the position of private physician, and if made privy councillor, reached the highest round of earthly happiness. Among these climbers there was a wild chase after titles. If you made yourself ridiculous by being addressed as "Mr. Counsellor of Justice" or Mr. "Counsellor of the Superior Court of Justice," whether P. Frank, himself privy councillor and private physician, called to mind how absurd it would have sounded to say Privy Councillor Hippocrates and Private Physician Galenus, was immaterial. This "miserable chase after titles by physicians," which Kurt Sprengel also severely criticised, this inequality, which was thereby carried over into the social standing and not tolerated by the weaker characters, caused much ill-feeling. If the privy councillor believed that his higher title also gave him a scientific preference or rank, the position of the lower ranks of the profession was hard indeed, and these often showed their spite by contradictions at the consultations. At the beginning of their practice the younger physicians had to battle with all these disadvantages. They soon perceived that scientific knowledge alone did not reap the greatest harvest, but that the artifices of flattery and ostentation were the most profitable. In consequence many intelligent men cursed their thankless profession, lived in poverty, or very early in life resorted to by-ways to obtain a practice by means of which they could support themselves. Others, like the quack, proclaimed their skill and corrupted the position of their colleagues in a malicious way. The rules prescribed by the state as to the proper conduct of physicians availed nothing. The Austrian physicians "ought, at all times, to lead a good, decorous and righteous life; deport themselves toward every one, as well as toward each other, in a quiet and modest manner; not derogate one another as to his skilfulness nor as to his profession, nor by underrating one of his colleagues obtain his patients; carefully investigating their condition and constitution, ought not to disclose the secretly discovered wants and frailties of anyone, and in consultations necessary to ascertain the recovery of a patient, should unite their jurisdiction and skill to further the same; not prescribe for a patient secretly, without the knowledge of the regular professor, nor give him medicines prepared by himself, unknown to the regular physician, but be especially impressed with the importance of their calling when following the same, and bear in mind that every carelessness perpetrated by them conceives a subtle murder for which they will some time be held accountable to God." (1753.)

The measures taken to prevent the quarrels of physicians were poorly chosen. Prominent men gave well-meant advice to the young physicians how they were to conduct themselves toward patients and colleagues and what would be of advantage to them in their pursuit. But they overlooked the fact that the young men revealed no inclination to accept such precepts and conducted themselves with the same spirit of independence as heretofore. Fines were imposed upon the physicians in Jülich-Berg, who quarreled during a consultation in the presence of a patient, or slandered an absent physician. A man who gave the provocation had to pay a fine of ten dollars, the one who took it up in a similar temper, five dollars—physicians fared no better, the fine for slandering an absent colleague and corrupting his good name was fifty dollars. Peter Frank believed that this nuisance might be abated by a more extensive education of the practitioner, therefore proposed the establishment of public libraries to promote greater facility for study, the contributions for which would be small in comparison to the expense of a private library. Circulars were to be sent out in the city and the country. He also recommended the formation of medical societies, to induce physicians to be more sociable and to meet once a week for the discussion of serious cases. Stieglitz did not share his opinion when a young man; deemed a true spirit of friendship among physicians more valuable and more beneficial than all medical associations, in which he did not believe.

The drinking habit, it is well known, was common among the physicians as well as the members of other social circles. The German has ever done honor to the cup and foreigners have not, without cause, held up this thirst as a general disgrace to him. In Venice it was customary to offer the physician a cup of coffee when paying a visit to a patient of nobility, so the busy doctor was obliged to drink on an average of twenty cups of coffee a day; in Southern Germany, however, the courtesy offered was a pint-glass full of wine.

The laity drank much brandy, the abuse of which gained such ground that Heister made the proposition to allow its sale only at apothecaries' where it was to be retailed in small quantities. To prove his assertion that brandy was unnecessary, Heister said that the Grenadiers at Potsdam were fine-looking men, although they were prohibited from indulging in a draught, by the King of Prussia. The number of practicing physicians being small in the first half of the century, their income was sufficiently large and lived however in modest circumstances, corresponding to those of the peasantry. During the reign of Friedrich Wilhelm I. of Prussia, doctors were not allowed to charge exorbitant prices for their services, especially when attending the poor; they "must diligently strive to make them as moderate as possible." In Austria a patient was not allowed to change his physician or surgeon, unless he had paid him well, yet "to contract for big wages was forbidden." Later on, the increase in the number of physicians impaired their incomes; many scarcely made a living in spite of their great exertions. At that remote period, complaint was made that deceased physicians' wives received no pensions, although their husbands had died from contagious diseases contracted in hospitals or during epidemics. Accordingly a Medical Widows Association was formed in Vienna, in 1758. The rules prescribed were:

| | Braunschweig. Lueneburg. 1719 | Grafschaft. Lippe. 1789 | Prussia. 1815 |
|---|---|---|---|
| Daily prescriptions | 3 Mgr. | 3 Mgr. | 1/6–1/4 Thlr. |
| 1 visit | 24 Mgr.—1 Thlr. | 12 " | 2/3–1 1/3 " |
| 1 visit after 10 o'clock | 1 Thlr. | 24 " | 2–3 " |
| Every succeeding day-visit | 6 Mgr. | 4 " | 1/3–2/3 " |
| Every succeeding visit after ten. | | 12 " | 1–2 " |
| A visit, one mile out, without traveling expenses or board | 1 Thlr. | 2 Thlr. | 1–2 " |
| A visit at night, one mile out, without traveling expenses or board | | 3 Thlr. | Besides the mileage 3–4 Thlr. |
| To attend a surgical operation | | 1 " | 1–3 " |

One Thaler equaled 73 cents; one Mgr., 23.85 cents.
(The Swedish physician had a right to demand one German specie dollar.)

On New Year's Day the druggists were wont to make valuable presents to the physicians and surgeons; it

was also the day for rendering bills. On account of the long interim, the laity did not remember how much they really owed for services rendered; the consequence was many complaints about the amounts charged. The following is the main substance of three contemporary protest letters written in the year 1760 in Hamburg: "Think of it! the Doctor has sent me such a bill that I'd like to put him in the pillory for it! I had a little hemorrhage of the lungs, in two days coughing up scarcely more than a little pailful of blood. A few times he called at night, and for such a visit, the distance being only a step, the impudent fellow charges me a rix dollar, and beside that for every other visit he put down one mark. Aye, truly, he earns his bread very easily."

A consumptive woman, worth about 40,000 marks, who had received sixty-two professional visits, and a number of bottles of medicine beside, writes: "Sir, here are the hundred marks of Lubec; but never enter my door again! I will not pay a mark of Lubec (legal) for a visit, and for the 38 marks charged for medicines, I might have kept house a long time or made myself some fine presents. My life is so dear to me and my cough is not so intolerable that I must allow myself to be reduced to a beggar."

"Is it right, that I should pay a bill to the Doctor for my husband who died, when he ought to have helped him? I am now tired of paying bills. Besides, I don't want to throw my money out on the street. He suffered with dropsy. Three times the water was tapped, but it did no good. An hour before his death he said: My dear wife, it is of no use, I must die, so don't give the fellow a dreyling (penny), for he is letting me waste away. Now he has died, so he shall not have a single penny."

Only a few physicians, principally the private physicians in the large cities, had royal incomes, being handsome paid for the cures they effected. The Courts of Vienna, Berlin and St. Petersburg made the first private physicians privy counsellors, thereby immitating a custom which had existed in France for a number of years. When Joseph II. suffered from an ulcer (fistula) in the rectum, which was successfully removed by the Knight of Brambilla, he made him and his body physician von Stoerk, a present of 1000 sovereigns and a diamond ring worth 6000 florins; the younger Brambilla received 6000 florins and a ring worth 2300 florins, and the private physician Kollmann 4000 florins and a ring valued at 1300 florins. A few days before the death of Joseph II. Guerin was called in for a consultation, for which service the Emporer gave him a barony and 100,000 florins. The Emperor's royal brother, Frederick William II., of Berlin, gave Dr. Brown, who successfully vaccinated the princes and princesses of the House of Prussia, 10000 Prussian dollars (73 cents each U. S.) and pensioned him for life, the amount of 600 Prussian dollars being by and by raised to 1200. Not less generous was the King of England, George III., who for the treatment of his well-known trouble by Father Willis set apart 1500 pounds sterling for his yearly wants to run twenty-one years, and for the son, a life-pension of 650 pounds sterling. The other attendants received 30 guineas for every visit they paid in Kew. Occasionally the position of the court physician was abused, for instance, in 1780 when he had for many years attended the poor aristocracy of one of the German Courts, they gratuitously sent him testimonials of their friendship, accompanied by diplomas of recommendation for services rendered, containing the gracious remark, that if he demanded as much as a penny for them, he would be disgraced with a dismissal.

*(To be continued.)*

## PECULIARITIES OF THE SURGICAL DISEASES AND INJURIES OF THE NECK.

BY EDMOND SOUCHON, M.D.

PROFESSOR OF ANATOMY AND CLINICAL SURGERY, TULANE UNIVERSITY, NEW ORLEANS, LA.

*(Continued from page 308.)*

### PECULIARITIES OF THE SURGICAL DISEASES AND INJURIES OF THE INFRAHYOID REGION.

*Congenital malformations.*—It is in the lower part of the region that the orifices of the bronchial congenital fistulæ of the neck are most frequently met, near the head of the clavicle; they may also be met in the thyro-hyoid region. Median fistulæ below the larynx exist but their internal orifice is always pharyngeal, not tracheal. Median thyro-hyoid fistulæ also exist, but they are always secondary, resulting from the rupture of a cyst; there exists only one positively identified case on record.

*Acquired malformations* present no peculiarities.

*Swellings of the region* are mainly due to the various diseases of the thyroid body, which will be especially described further on.

*Burns and the effects of cold* are only peculiar in the possibility of being followed by cicatrices which bind the neck, and chin down to the sterum in a very peculiar manner.

*Contusions* are usually due to blows, to the passage of a carriage wheel, to garroting, to hanging; on account of the presence of the larynx and trachea they may be followed by great concussion effects altogether out of proportion to the severity of the blow. Contusion of the thyroid cartilage by a blow upon and close to it may cause death without any appearance of a lesion. Contusions may cause rupture of the larynx and trachea. In hanging the compression very often bears upon the base of the tongue, and the larynx with its vessels and nerves are not injured. In strangulation the traumatism is applied upon the larynx and the trachea, which may be torn by the fingers and the rope; all the structures are more or less torn. In some cases lesions of the skin of the neck, of the trachea and of the larynx may cause inhibition of the heart, of the respiratory organs, and of the brain. It is especially in cases of traumatism of the anterior region of the neck that we observe a complete loss of consciousness and a respiratory and cardiac syncope. This is what takes place in cases of death through incomplete hanging, which does not prevent the passage of air through the respiratory passages. In such cases the red blood of the arteries continues red in the veins, whereas in death by true asphyxia the blood becomes rapidly black in the arteries. Accidental *wounds* are rare; the most frequent are punctured wounds resulting from a fall on a sharp body.

Homicidal wounds are not so rare; they are usually incised wounds and a cutting instrument is used by the criminal to make believe they are self-inflicted or accidental. Suicidal wounds are the most frequent; they are seldom punctured; they are usually incised wounds; they are most frequent at the point of the thyro-hyoid ligament or below it; they are lacerated,

jagged, deeper on the left side; they are usually directed from left to right and obliquely downward or transversely across the neck; the large vessel are seldom injured. Usually the suicide, throwing his head back, cuts too high; the trachea and the rigidity of the sterno-mastoid protect the vessels. If the head is too much bent the larynx, the trachea and the sterno-mastoid also protect the vessels. There is usually a single gash. These wounds are more commonly fatal than the other wounds, because the victims are usually intoxicated or are laboring under delirium tremens or insanity; these patients should be watched closely because they often tear away their dressings and die of hemorrhage. These wounds sometimes present much hemorrhage, although none of the larger vessels are hurt, except the anterior jugular vein; there are cases on record where air has penetrated into it and to the heart, causing death. The edges of these wounds are often much separated and have a tendency to roll in on account of the action of the fibers of the platysma; coaptation therefore needs more care. Lacerated wounds are very rare. Gunshot wounds are also rare. Balls may traverse the neck without wounding any important structures, because the tissues are round in form, elastic, movable.

Bites by dogs are comparatively common; the anterior region of the neck is the favorite aim of dogs, especially the bull-dog; they cause all the lesions of strangulation and of incised wounds.

Non-penetrating wounds, *i. e.*, not involving the larynx, trachea, pharynx, esophagus, recurrent nerves, are not peculiarly serious and should be treated as elsewhere, taking care to secure the divided vessels, etc. Penetrating wounds due to any cause involving the respiratory or digestive tract and the recurrent nerve are of course severe. Punctured wounds, especially in duels, may penetrate into the mouth, pharynx, esophagus, larynx or trachea; it is important to look for such penetrations and to keep the parts as thoroughly disinfected as possible because there is often risk of infection of the wound from within. The landmarks are the hyoid bone, the thyroid and cricoid cartilages; the laryngoscope should be used.

Penetrating wounds above the larynx are less dangerous than those of the larynx and those below it; the lower the wounds the more dangerous they are. Wounds through the thyro-hyoid membrane penetrate into the pharynx, injure the epiglottis, the aryteno-epiglottic folds, the cartilages, the vocal cords; they are less dangerous than below because they allow feeding; they are more liable to suppuration. Wounds of the larynx are comparatively frequent because of its prominence; they are usually very dangerous and may be diagnosed by the rushing sound of the air passing through. They should be treated like those of the trachea. Wounds of the trachea are commonly followed by great hemorrhage; because of the large vessels around it, which may also have been wounded by the same cause. When the severance is incomplete, there is slight gaping; when the section is complete, the lower end is drawn in deep at each effort of respiration, and the soft parts cover up the orifice, causing suffocation. In all cases keep the blood and foreign substances out of the respiratory tract until hemorrhage is checked. Rose's position may be of assistance. In incomplete wounds there is slight gaping and the wound should not be stitched; the head should be flexed on the chest and fixed in that position by a liquid glass bandage. In complete wounds, when longitudinal, there is little gaping. In complete transverse wounds the retracted lower end should be searched for and a strong thread passed deeply through it, an attempt at stitching should be made; if it fails a tracheotomy tube should be placed in it; the tube should be longer than the ordinary one because the swelling may lift it out of the trachea; the head should be kept flexed also; a moist cloth should be placed over the tube; the room should be warm, at about 70 degrees, and a vessel with boiling water should keep the atmosphere moist; all this to avoid bronchitis and pneumonia. Later we should be mindful of the exuberant granulations which may obliterate the canal.

The sequelæ of wounds of the air passages are permanent contractions of these passages, aphonia, fistulous orifices, entire occlusion of larynx, the air passing through the external wound; fistulæ are hard to cure. Wounds of the pharynx and esophagus are usually done through the side of the neck by balls, knives, etc.; they cause much pain, spasms, hiccough, dysphagia, more or less suffocation; there is escape of food through the wound if this be of a certain size; the thirst is great. The patient should be fed by enema; if the use of the esophageal tube becomes necessary from insufficiency of the rectal alimentation, it should not be left in place, but introduced each time. In incised wounds stitch immediately; in lacerated wounds let the wound granulate. Rupture of the esophagus from contusions are rare; the special symptom is hematomesis. When the diagnosis is sure cut down upon the injured spot along the anterior edge of the sterno-mastoid; stitch the wound if possible; if not, pack and let it granulate.

The immediate dangers of wounds of the anterior region of the neck are death from hemorrhage; although the hemorrhage stops from syncope it may start again later; from asphyxia due to the tongue or epiglottis or a piece of cartilage obstructing the passage, or to blood and clots in the larynx and trachea; from penetration of air in the veins. Penetration of the respiratory tract is recognized by cough, blood expectoration, hissing or boiling sound. The secondary dangers are inflammation of the larynx, edema of the glottis, bronchitis, pneumonia, abscess and purulent dissections, emphysema, aphonia more or less complete, dysphagia; secondary hemorrhages are common and serious complications. In all injuries with solution of continuity of the mucous membrane the most frequent source of death may be mediastinal emphysema and inhalation pneumonia.

Wounds of the neck parallel to the longitudinal fibers of the muscles are more apt to be followed by emphysema. The remote effects and sequels may be exuberant granulations causing dyspnea; cicatrization, producing strictures of the larynx, trachea and esophagus; persistent fistula; paralysis due to inflammatory thickening, which may disappear later, or due to injury of recurrent nerves or the pressure of a bullet. All these complications should be treated here as elsewhere.

Dislocation of the hyoid bone is very rare. There is one case (Gibbs) in which the dislocation was muscular; it was accompanied by a peculiar click on the left side of the neck and a sensation of choking; examination showed displacement of the left horn of the hyoid bone; reduction was affected by throwing the head backward toward the right side, so as to stretch the muscles of the neck, and then suddenly

depressing the lower jaw, thus bringing the depressors of the hyoid bone into action. All the following fractures are usually due to violent contusions.

Fracture of the hyoid bone is rare, but it is well-known; its site is usually the great horn, near the body; it may be unilateral or bilateral; it is characterized more or less by hoarseness and dysphagia, according as it is without or with displacement and without or with deformity, it is accompanied by more severe symptoms, especially when swallowing fluids, which pass into the larynx, because of the imperfect action of the epiglottis; it is reduced by using the fingers inside the oral cavity.

Fractures of the larynx are less rare than fractures of the hyoid bone; they are due to great violence; they are usually accompanied by much pain and suffocation, often calling for immediate reduction or for tracheotomy. Each cartilage may be fractured by itself; the thyroid is most frequently the site; fractures without displacement are not so grave. Fracture of the thyroid cartilage is more common in old people, because of the ossification of the cartilage. Fracture of the cricoid is more dangerous than the others, perhaps because of its small size, which causes slight displacement to be followed by serious obstruction. Fractures or subcutaneous ruptures of the trachea without actual wound have been observed after great traumatism; they are less frequent than the others; they present the same symptoms and indications as the fractures of the larynx, but the lesions are lower down. The trachea should be opened below the fracture, and a long tracheotomy tube be introduced; when the fracture is low down, the lower end should be hooked, raised and sutured to the skin or upper fragment. Spontaneous ruptures of the trachea due to violent efforts, are admitted by some. All these fractures are more serious if accompanied by displacement which obstructs the air passages. The symptoms are those of obstruction and shock, plus those of fractures in general; crepitation, abnormal immobility, plus also aphonia, dysphagia and emphysema. The fragments should be replaced by external and internal manipulations; if necessary, the parts should be incised through and the fragments stitched. Tracheotomy is often indicated; it is well to perform the operation before grave symptoms develop, because these sometimes come on so suddenly that the patient may succumb before the surgeon can be had to operate.

*(To be continued.)*

## Fourteenth Biennial Report of the Board of State Commissioners of Public Charities for the Years 1895 and 1896.

ARTHUR R. REYNOLDS, M.D., PRESIDENT.

*(Continued from page 315.)*

### IMPROVEMENT OF ATTENDANTS IN HOSPITALS FOR THE INSANE.

We believe that the State hospitals for the insane may well excite the pride of the citizens of Illinois. Their material equipment is admirable and in the whole their condition has undoubtedly never been as good as it is at this time. Such institutions, however, can not stand still. They must either retrograde or continually improve.

The medical and nursing care should always command our greatest interest, and it is here as in educational institutions of the State, that there must be continuous progress if there is not to be retrogression.

Early in 1896 the State Board of Charities sent out a list of inquiries to superintendents of hospitals for the insane in the United States regarding attendants or nurses. We present below a condensation of the replies received, fifty-eight in number. The inquiries were made because of the belief of the board, founded upon careful observation of hospitals in this and other States that improvements in what should be the nursing care of the patients is at present the greatest administrative need of hospitals for the insane.

In the condensed statement below it will be seen that out of the fifty-eight State hospitals considered less than one-half have training schools.

The general average monthly wage for working day of sixteen hours is from $18 to $30 per month for men; from $12 to $25 for women. It will be remembered that the State of Illinois considers eight hours a working day for clerks and others whose employment does not carry with it any great responsibility.

On the other hand it is, so far as the board knows, universally admitted that no work is more exhausting to the nervous system than caring for the insane. It requires a disciplined mind and high character to bear calmly and patiently with the violent or annoying conduct of many insane patients and to regard all their unreason and extravagance as symptoms of a disease, no more to be resented than a rise in their temperature. Ought the State to expect to obtain such qualifications when the hours are twice the legal working day and the compensation no better than that of city house servants?

For the most part the attendants both lodge and eat upon the wards, *i. e.*, practically in the society of their patients. The time during each twenty-four hours in which they are permitted to absent themselves from the ward is two hours or less in forty-seven hospitals, including four of those in our own State.

The proportion of attendants to patients, as it actually exists in the hospitals, is, with few exceptions, much below the number recommended by the different superintendents of the same institutions. The superintendents, however the conditions of their own hospitals vary or depart from the desired standard, recommend in thirty-eight cases: 1, training schools; 2, higher wage; 3, housing and boarding of attendants in separate buildings apart from patients; 4, separate night service for the wards—which is the necessary accompaniment of boarding and housing attendants in separate buildings.

A more general employment of women attendants upon men's wards is recommended. This recommendation comes especially from those superintendents whose standing best entitles their opinion to respect. There is practically unanimous testimony to the superior service obtainable from women. This is ascribed in part to their natural taste for nursing, and in part to the fact that more avenues of desirable and lucrative employment are open to men than to women. We would respectfully submit that since it is possible to obtain a better grade of service among women than among men for the same pay, there is good reason from an enonomic standpoint, for urging the most general employment of women practicable. Women are employed on men's wards in some of the most progressive hospitals—including one of the Illinois hospitals. This does not mean that there shall be no men attendants, but points toward a partial introduction of the system in the general hospitals, with nurses in charge and male orderlies. This system, so far as tried, has satisfied the humanitarian and the physician alike.

It seems evident to us that, in order te secure proper nursing, the wage must be raised; especially does the women's present wage seem to us inadequate and unfair for the service demanded. The wage paid can not invite or retain, with any certainty, the sort of ability demanded for the care of the insane. It appears to be the general opinion of the superintendents, as shown in the "Remarks," that by increasing the requirements for an attendant, and also the pay and dignity of the occupation, efficient and humane service can be obtained, and in no other way.

Four of our Illinois hospitals are included in the replies and probably present the average condition indicated in schedule. One of them has a training school for nurses and employs nurses upon men's wards. The one failing to report is in no particular superior to the four which appear in the condensation.

### VISITING STAFF.

While as we have stated above, we must depend upon the general practitioner to keep people out of the insane hospitals, we must look to the alienist for improving their medical care after they are received into the hospital.

It has proved impossible in all the States to maintain in a hospital a medical staff of expert alienists. The superintendent, burdened as he is with the administrative work of the community of from 1,000 to 2,500 souls, which our various hospitals constitute, can not take personal charge, medically, of the patients upon the wards also.

We therefore would recommend a visiting staff of alienists

or specialists upon mental diseases, who, together with the resident physicians, shall constitute the medical staff of the various insane hospitals, such visiting staff to visit in turn, examine patients, hold clinics and deliver lectures to the resident physicians, internes and nurses. We believe that such physicians should be paid for their services.

PATHOLOGIST.

The Board believes that the pathologic work of every insane hospital in the State should be thoroughly done. This can only be done under competent direction, and the board recommends as the most effective and economic method of doing this the appointment of a State pathologist, who shall be a member of the visiting staff, but shall devote his entire time to the pathologic work of the hospitals, and shall make the same uniform in character throughout the State.

MERIT SYSTEM.

The Board recognizes that such suggestions as the above concerning physicians and nurses, must fail, even if nominally carried out, unless all the positions involved be placed entirely upon a basis of efficiency.

In fact the entire administration of these hospitals must, in the opinion of the board, depend upon merit, absolutely unmoved by fluctuations of political party fortune, if the institutions are to continue long free from grave disasters.

COMMISSION.

In view of the statements made above we would respectfully request the Governor to appoint a commission of three physicians experienced in the care and treatment of the insane, to coöperate with this Board in formulating and putting into execution plans for securing: 1. A general plan for the future care of all insane by the State. 2. For promoting the most efficient medical and nursing administration of the existing hospitals. 3. For placing the service of the insane hospitals upon a basis of merit only.

CIRCULAR AS TO TRANSFER OF INSANE TO HOSPITALS.

We append a copy of a circular sent out Sept. 1, 1896. This was followed by a letter to all county judges, calling their attention to the fact that under the provisions of the Lunacy Law, they have power to direct how insane patients shall be transferred to the hospitals. We have reason to believe that these efforts to improve the care of insane patients prior to arrival at insane hospitals have had some good effect, but the matter still needs earnest attention.

PRIVATE HOSPITALS FOR THE INSANE.

Under the Lunacy Law of this State the Board of Commissioners of Public Charities is directed to license all private insane hospitals and to formulate by-laws as to their administration. Such licenses are good for twelve months and must be renewed annually, in order that the institution may lawfully exist. If there is a change in the management of a private hospital, the law requires that the Board be notified and that the license be transferred in the discretion of the Board.

During 1896 application was made to this Board for permission to transfer from Dr. Anna McFarland to Dr. George C. McFarland the license granted by this Board to Dr. Anna McFarland to carry on the private hospital for the insane known as Oak Lawn and situated at Jacksonville. After a careful examination of the case the board declined to consent to the transfer of license to Dr. George C. McFarland. Notwithstanding the refusal of the board Dr. George C. McFarland has continued to carry on the hospital. The Board has therefore referred the matter to the Attorney General for prosecution as by law directed. Sec. 33, Lunacy Law.

It is plain that the provisions of the Lunacy Law in regard to licensing private insane hospitals are intended as a protection to the public and a guarantee of good conduct. Such a law is not only a protection to the public and to the insane patients received into private hospitals, but is also a protection to private hospitals which are carried on faithfully and humanely.

We trust that the decision of the supreme court may be speedily obtained as to the provisions of lunacy law covering the licensing of private hospitals, to the end that the law may be amended if necessary.

The private hospitals for the insane now licensed are: Bellevue Place, Batavia; Dr. F. C. Winslow's Private Hospital, Jacksonville.

SOCIETY FOR AIDING CONVALESCENTS DISCHARGED FROM STATE HOSPITALS FOR INSANE.

We commend to private benevolence the temporary care of convalescent patients discharged from insane hospitals. Persons thus discharged as recovered struggle under great disadvantages in many instances in trying to obtain opportunities to earn a living; it is the observation of all superintendents that discouragement and disappointment have frequently brought on another attack of insanity and compelled a return to the hospital, which might have been avoided if on leaving the institution the patient had enjoyed a little friendly help. A small yearly sum and a moderate amount of personal interest would perform a most humane and useful service in carrying on a society for the assistance of patients discharged from the State hospitals, and we commend the subject of the organization of such a society to the attention of philanthropic citizens. There are two societies for this purpose in Paris, which are reported as most beneficent in their result.

THE AUXILIARY BOARDS OF COUNTY VISITORS.

These boards have proved valuable in some counties already, but have by no means reached their full measure of usefulness throughout the State. A pamphlet containing reports from such as had performed active service was issued by this Board during the year. We append a list of the visitors who made reports in July, 1896, together with statement of visits made. In some counties marked improvement in the equipment and administration of the almshouses has been secured and less frequently improvement in the jails.

We feel that it is for public interest that these volunteer and unpaid public servants should be encouraged in a wise and vigorous performance of their duties of visiting the county jails and poorhouses and keeping themselves fully informed as to their condition. Yearly conferences addressed by experts in the care of dependents and in preventive measures, and where full opportunity for discussion is allowed can not but prove most valuable, and are essential as a means of educating public sentiment in the State.

At the State Conference of Charities held in November, 1896, it was found that the attendance of auxiliary visitors was smaller than had been hoped, and in repeated cases the members of the auxiliary boards stated that they could not afford to attend. We would recommend that the legislature permit the State Board to pay the railroad fare only to the State conference of one delegate from each county.

STATE CONFERENCE OF CHARITIES AND CORRECTION.

As indicated above, the visits of members of the Board of Public Charities to the various counties of the State convinced them that an annual conference of the auxiliary boards of visitors, the superintendents of State institutions and of all others interested or engaged in the care of dependent and delinquent classes in the State would prove of much service in diffusing throughout the State a more general public interest in problems which are little understood, and which have a vital relation for every taxpayer, as well as an interest for humane citizens. Such State conferences have been held in various other States for years with good results. The State Board of Charities therefore called a State Conference of Charities and Correction, which was held in Springfield Nov. 12 and 13, 1896, of which we append program.

The conference formed a permanent organization with the following officers for the ensuing year:

President, Jenkin Lloyd Jones, Chicago; vice-president, Fay Lewis, Rockford; secretary, Mrs. John Lutz, Lincoln, executive committee.

Secretary of the State Board of Charities ex-officio Clerk of the Executive Committee.

The proceedings of the Board have been published and form a valuable contribution to the literature of the State upon the subjects presented.

DEPENDENT CHILDREN.

The State through its law of guardian and ward has long said to the rich child, when the normal family relations were for any reason destroyed: "You are a ward of the State; your name is upon the records of the court; you shall not be lost; your estate shall be used for your education, and the guardian appointed by the court shall report his stewardship."

Because the child deprived of natural family care has no estate there is not less but more reason for public watchfulness. From the ranks of neglected, untaught, unprotected children we have no right to expect that upright, self-respecting, self-sustaining citizens will grow.

The law of Illinois regarding dependent children presents anomalies which certainly have never been purposed by any one and which public interest demands should be eliminated.

The county court can find a child "dependent" under the Industrial School Acts, as follows:

*Part of Sec. 3 in aid of industrial schools for girls.*—"Every female infant who begs or receives alms while actually selling or pretending to sell any article in public, or who frequents any street, alley or other place for the purpose of begging or receiv-

ing alms; every female infant who shall have no permanent place of abode, or who shall not have proper parental care or guardianship, or who shall not have sufficient means of subsistence, or who from any cause shall be a wanderer through streets and alleys or other public places, or who shall live with, or frequent the company of, or consort with reputed thieves or other vicious persons, or who shall be found in a house of ill-fame, or in any prison or in a poorhouse."

*And part of Sec. 3 of act to provide for and aid training schools for boys.*—"Every boy who frequents any street, alley or other place for the purpose of begging or receiving alms; every boy who shall have no permanent place of abode, proper parental care or guardianship; every boy who shall not have sufficient means of subsistence, or who from other cause shall be a wanderer through streets and alleys or other public places; and every boy who shall live with, or frequent the company of, or consort with reputed thieves or other vicious persons."

The definition of "dependent child" under these statutes is probably sufficiently broad to cover all cases in which the child's normal family protection has been so broken down that public interest and humanity demand the intervention of the State.

The anomaly in the law is discovered when it is shown that after the judge has thus found a child dependent, he can, under the statute, dispose of the child in but one way, namely, by confiding it to the care of an industrial school—a private corporation. The school or some officer thereof becomes its guardian, having a right to retain during minority, or to discharge at any moment.

Again, it is found in practice that parents whose children are abandoned to almshouses, are nevertheless able to legally and successfully resist efforts to place the children in homes or give them for adoption.

As the counties are compelled by law to pay ten dollars monthly for each child placed in an industrial school, while the child may be retained in the almshouse at a much lower apparent cost, or it can be left in its bad surroundings at no immediately evident cost to the county, many counties object to the expense of placing the child in an industrial school, and when the supervisors or county authorities do so object, it is difficult or impossible to obtain commitments to the industrial schools.

Again, there is, as indicated above, no law forbidding the indefinite detention of children in almshouses, and many children pass through the almshouses of this State yearly through no fault of their own, receiving not only the stigma of pauperism, but the taint of poorhouse associations.

Our last report instances in detail some of the evils of bringing up children in the poorhouse, and it is unnecessary to again set forth special instances. It is true that the majority of children who are in the poorhouses do not grow up and marry inmates, as has sometimes occurred, but the history of pauperism in this State, so far as it can be traced, shows that the associations of the poorhouse in the parents breed dependency in the children, as has been demonstrated by long family histories in older communities.

The Board renews its former recommendation that the retention of any normal child between the ages of 2 and 16 years in any almshouse should be forbidden by law. It recommends that the County Court should have the power, upon finding the child dependent, to place him in an industrial school, or in a private family at no greater cost, or to make such other disposition as he may deem for the best interest of the child. It recommends that by agents, to be appointed by this Board, or by such other means as may be deemed wisest, the character of the homes into which children thus "placed out" are sent, shall be frequently and faithfully examined, and the education and proper maintenance of the child carefully supervised, and that the same shall be reported to the county from which the child comes, and to the body appointing the visiting agent. The States of Michigan and Massachusetts offer examples of State care of dependent children, which we can not afford to neglect or fail to imitate in such measure as best accords with our existing system of industrial schools. The State of Michigan maintains a State school; Massachusetts has abolished hers as unnecessary. In both States the essential feature is a system of "placing out" children by the State itself.

*(To be continued.)*

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**Laughter.**—Laughter is a most healthful exertion. It is one of the greatest helps to digestion with which I am acquainted and the custom prevalent among our forefathers of exciting it at table by jesters and buffoons was founded on true medical principles (Hufeland).

# SOCIETY PROCEEDINGS.

## Chicago Ophthalmological and Otological Society.

*Regular meeting held at the Chicago Athletic Association Rooms, Nov. 10, 1896.*

Dr. HENRY GRADLE in the chair.

The minutes of the last meeting were read and approved.

The application of Dr. J. W. Heustis of Dubuque, Iowa, was read and referred to the Committee on Membership.

Dr. HOTZ showed a case of Thiersch grafting for pterygium. Four years ago Dr. Hotz had suggested the filling up of the space left in the conjunctiva after removal of a pterygium by Thiersch graft. In the ordinary pterygium the operation of excision with bringing together of the conjunctival edges is easy, but in certain cases the space left is so large and the amount of tissue removed so great that he thought it would be advisable to fill it up with a graft. He had used this method a few times about a year ago and showed a case to the Society. In this case the graft had not been fastened, but was simply laid over the sclera and during the first few days it shifted partially onto the cornea. The Doctor had seen the patient only a week ago and the small tag of skin was still over the corneal surface. In the case tonight the pterygium extended considerably beyond the pupil, was very large, measuring at the corneal edge about 8 mm. and at apex 5 mm. The operation was done on May 1. After the removal of the pterygium a small shaving of skin about 3 mm. wide and 9 mm. long was taken from behind the patient's ear. This was laid over the sclero-corneal junction and each end of the graft was fastened down by a stitch, in order to avoid the shifting. In spite of the fact that there was considerable disturbance of the cornea from infection, numerous small points making their appearance in the neighborhood of the wound, the healing of the graft was rapid. It shrunk to about 2 by 7 mm. in size. The epidermis became macerated and could be rubbed off with a blunt probe after a few days, leaving underneath a pink membrane. At present the surface looks about like normal conjunctiva.

In reply to Dr. Robertson as to how many cases relapse, the President stated that Fuchs says there should be no recurrence of pterygium if it is possible to close the conjunctival wound.

Dr. PINCKARD referred to the method of removal by means of a grooved director and a small cautery knife, the director being passed under the neck of the pterygium and incision made with the knife from edge to edge.

Dr. GRADLE stated that he had done subvolution once with a very good result.

Dr. MONTGOMERY said that he had in broad pterygia dissected off the head and body of the growth and simply allowed the head to roll under without fastening it with a stitch. He had found that the growth showed no tendency to recur under these circumstances. He laid particular stress on the fact that the dissection from the sclera must be very complete. He reported a case where the growth was tendinous in character and seemed to be fixed to the internal rectus muscle. Numerous operations were done but no permanent benefit resulted.

Dr. GRADLE—The allusion by Dr. Hotz to purulent infection of the cornea in his case induces me to bring before you a very sad result of pterygium operation within my experience.

A man had been treated by me for nearly a year for trachoma of three years' duration. He seemed entirely cured of his trachoma, one cornea had always been normal. The other one had been covered by a moderate pannus, which had thinned considerably under the treatment and now permitted V=15–50. On this eye there was a small pterygium on the inner side, apparently slightly progressive. I had deferred an operation until after the trachoma was cured. The head was then dissected off the cornea and the small conjunctival gap closed with a suture. There was more than the ordinary amount of inflammatory reaction of the conjunctival for the first four days, then it subsided. Thereupon minute white specks of infiltration appeared in the cornea adjoining the wound and from thence spread in a circular path around the cornea, forming an incomplete circle about 3 mm. inside of the limbus. This was accompanied by increasing ciliary irritation and injection. The area between limbus and the line of infiltration became vascularized and hazy. On the twenty-fifth day the infiltration on the site opposite and furthest from the wound changed into ulceration. The original wound had healed long before this and the minute infiltrates nearest to it had receded considerably. The ulcer was now touched with the galvano-cautery. This prevented extension of the ulceration, but did

not prevent further infiltration in the form of minute specks in the same circular path. The disease had been very painful and the pain did not abate while the cauterized ulcer healed. A few days later it was evident that a relapse of the trachoma had occurred, as the conjunctiva of the lids now showed the characteristic appearance. For a few days the lids were touched with sulphate of copper, but without benefit. In spite of all customary local treatment (atropin, etc.) a hypopyon made its appearance, yet the individual specks of infiltration all receded after existing for a few days. The patient, worn out by his pain, went to the country for a week. When he returned the irritation had lessened very much but the cornea was uniformly hazy and vascular, and V= ∝. There was now a characteristic granular disease of the conjunctiva, which undoubtedly accounted for this unusual form of corneal affection.

Dr. J. E. COLBURN reported a case of

CYST OF THE CORNEA AND A CASE OF PIGMENT CELL SARCOMA OF THE CORNEA, FOLLOWING A PTERYGIUM.

Willie G., aged 15 years, was presented by Dr. E. M. Smith at the Chicago Policlinic. About six months ago the patient's parents first noticed a pearl-like swelling about the size of a half pea, located midway between the cornea and inner canthus; it extended rapidly in all directions till it occupied the area indicated in the drawing. There has never been any evidence of inflammation.

FIGURE 1.

When examined by me the tumor presented a pearly semi-transparent appearance, somewhat irregular in form; there was a slight depression just at the sclero-corneal junction, which was marked by the vascular ring. The tumor had forced its way into the cornea, separating its layers. The outer layer was transparent enough to allow a good view of the sclero-corneal junction of the inner wall, and somewhat deeply into the sclera portion of the tumor. The tension of the tumor seemed to be the same as that of the eye in other parts of the globe.

The parents recall that in early childhood while at play with a Newfoundland dog the child received an injury to the eye, which was followed by a scar located near the center of the cornea. There was no change in the shape of the corneal scar.

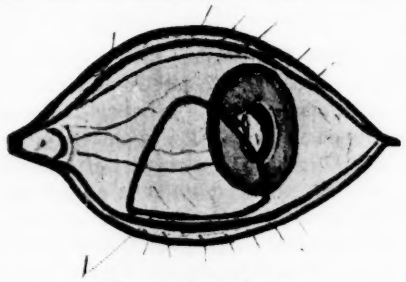

FIG. 2.—1, base of tumor.

The eye was cocainized and the conjunctiva opened over the base of the tumor near its lower edge. The structure of the outer wall of the tumor was found to be continuous with the sclerotic. Fearing that there might be some connection between it and the cavities of the eyeball and the tumor, a very slight incision was made. This was followed by a rapid flow of clear water and a collapse of the tumor; the tension of the eye remaining normal, the incision was extended. The inner surface was carefully examined, for it had been suggested that it might contain a cysticercus. Nothing, however, was found to indicate that the cyst had been tenanted. The lining membrane was not vascular and could not be distinguished from the sclera; the outer wall was thin but firm and resisted the knife, cutting like a true scleral tissue. The inner wall was somewhat depressed and did not seem to be restored to the normal curvature by the removal of the tension of the tumor. After the conjunctiva had been dissected carefully back, the outer wall was entirely removed, the ocular surface carefully denuded of the lining membrane and the conjunctiva made to cover the exposed surface. The central fibers of the internal rectus muscle were not disturbed. The wound healed promptly and the gray area which extended farther than the tumor upon the cornea, cleared up. The old scar, however, remained without change in appearance.

A careful search through the opnthalmic literature at my command is not rewarded by finding the counterpart of the above case.

In 1894 Wm. S. called my attention to a small, progressive pterygium which had made but slight advance upon the cornea. The growth was again examined by me in six months and a marked advance noted. Three months later the growth was removed by tearing it from the cornea, excising the central portion of the conjunctival thickening down to the sclera, together with the tongue of growth just removed from the cornea. The conjunctiva was now separated from the corneo-scleral junction, and freed from its subconjunctival attachments, and the upper and lower edges brought together by two sutures. The corneal wound was scraped, the eye flushed with a saturated solution of boric acid and a light bandage applied.

The wound closed quickly and three months after the operation nothing could be noticed upon the cornea, and the conjunctival section was smooth and non-vascular.

About six months after the operation the doctor called my attention to the eye, saying that the pterygium had returned. There was no change in the conjunctiva, but upon the cornea there had appeared a thick, dark, slightly vascular mass extending from the near median line upward, and limited by the corneal margin. Cocain was used and an attempt was made to raise and dissect it away. The forceps disclosed the fact that it was papillated and bled freely when torn. Fragments of the growth were taken off and examined by Dr. Hoadley. He reported columnal epithelium, spindle cells of a large size and a dark pigment with some connective tissue.

We decided to cauterize the whole surface with electro-cautery. This was done and but slight reaction followed. The wound closed and for several months close scrutiny was made, but no return of the growth was observed.

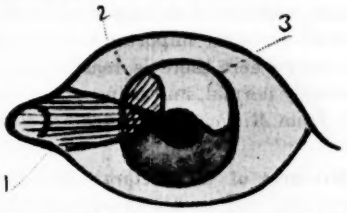


FIG. 3.—1, pterygium; 2, area of first growth; 3, area of second growth.

It was my intention to report the case in connection with some other cases of diseases of the sclero-corneal region. However, just as I was preparing my notes, the doctor called my attention to a greatly extended growth, similar to the one we had removed. This was of thinner structure, but covered all the area that had been involved before and extended to the equator on the opposite side, but not coming quite to the center of the cornea. (See Fig. 3.)

May 1896 I again burned the whole corneal surface involved, with galvano-cautery, using a low degree of heat, but burning much deeper and more thoroughly than before. The reaction was severe but the repair rapid and uninterrupted. The eye was irritable for some months. The corneal astigmatism became regular and glasses were given; these have had to be changed frequently; vision is now 20—30. The cornea is transparent and regular.

The report of the microscopist gave the same finding as in the first examination.

We have made frequent examinations of the eye during the past months and are unable to see any evidences of return of the growth. The doctor has had two tumors removed from the face, but no examination was made to determine their true character.

At the President's suggestion the January meeting was set aside for the discussion of "Asthenopia not due to Errors of Refraction."

On motion the society adjourned.

C. P. PINCKARD, Secretary.
103 State Street.

## PRACTICAL NOTES.

**Heredity of Gastritis.**—An article in the *Bulletin Médical* of January 6, calls attention to the frequency of gastric disturb-

ances of the same type in different members of a family, as revealed by analysis of the gastric secretions. In most cases they are unsuspected by the subjects and only manifest themselves by secondary neurasthenia or other trouble. This hereditary tendency should be borne in mind and appropriate treatment instituted, especially in the case of persons with an arthritic inheritance. A number of interesting observations are cited to confirm the writer's statements.

**Substances Incompatible with Antipyrin.**—1. Those which precipitate the antipyrin, such as phenic acid in concentrated solutions, tannin and its preparations, tincture of iodin, chlorids of mercury, etc. 2. Those which decompose antipyrin when triturated dry with it: calomel, which forms with it a toxic combination, naphthol; chloral which forms an oleaginous liquid; sodium bicarbonate, which generates an odor of acetic acid; sodium salicylate, which also forms an oleaginous compound with it, and lastly the salts of quinin and caffein, whose solubility is increased by antipyrin.—*Gazette Méd. de Liege*, December 31.

**Effect of Chloroform and Ether Narcosis on the Liver.**—Bandler of Prague performed a herniotomy on a hitherto strong, healthy man, who was however a hard drinker, using chloroform as the anesthetic. A few days afterward icterus developed and the patient died with cholemic symptoms. As leucin and tyrosin were found in the urine, *intra vitam*, the diagnosis of acute yellow atrophy of the liver had been made and it was confirmed by the necropsy. Bandler has been since studying the literature on the subject and experimenting on animals, to determine the exact effect of chloroform narcosis on the parenchymatous organs. He states that every case of chloroform narcosis showed degeneration of the liver cells afterward, while this degeneration was absent or very slight after ether narcosis. He therefore urges the importance of avoiding the use of chloroform in cases where there is reason to suspect that the liver is not perfectly normal, and using ether instead.—*Wien. klin. Rundsch.* from *Mitth. a.d. Grenzb. d. Med. u. Chir.*, No. 3, Vol. I.

**Dilation of Strictures of the Urethra.**—Wossidlo states that relapses are frequent and in his experience almost inevitable when the urethra is only dilated to a No. 25 or 28 Charr. but that they are very rare and yield promptly to treatment if the dilation is carried as far as a No. 30. Microscopic examination shows that in the former case the mucous membrane is not normal, the lumen is funnel shaped and the crypts are filled with an infiltration. Only when the dilation is carried beyond 30 does the color return to normal and the infiltrate disappear. This can only be accomplished by an Oberland or Kollmann dilator. The process must not be hastened, and the reaction following each dilation must be allowed to run its course, which requires ten days, sometimes three to four weeks. The reaction can be favorably influenced by a ½ to 1 per cent. solution of nitrate of silver. Dilation accomplishes nothing with rigid, unyielding strictures and internal urethrotomy is indicated for them.—*Cbl. f. Chir.*, December 26.

**A Case of Porro's Operation.**—Schwartz reports, in *Centralblatt für Gynäkologie*, a successful case of delivery by this operation. The patient was a rachitic dwarf, aged 19 years. She was three feet, three inches in height, well nourished and muscular. There was lordosis with extremely pendulous abdomen. The pelvic deformity was remarkable, even in a dwarf. Between the iliac spines the measurement was seven and two-fifths inches, between the trochanters ten inches. The conjugata vera was one and one-half inch (4 centimeters or 1.56 inch). The patient was in the ninth month of pregnancy. Pains set in on Jan. 16, 1896; in a few hours the membranes burst spontaneously. Pains continued through the night, but were quite ineffective. Schwartz saw her early on the morning of January 17. The temperature was 104, the pulse 180. Septic peritonitis was present. Porro's operation was at once performed with full precautions. The child was a fully developed female, 19.5 inches long and 5 pounds in weight. It was saved and reared. For two or three weeks the patient's life was in great peril through septic symptoms with peritonitis, followed by diarrhea. The stump of the uterus was treated subperitoneally. By February 5, convalescence was in steady progress.

**Fish Diet in Chronic Nephritis.**—J. E. Ferran describes in the *Archivos de la Policlinica* for December, his success in severe and prolonged chronic nephritis by suspending the classic treatment: potassium iodid, milk diet, etc., and putting his patients on an exclusive fish diet, selecting the fish that contain the most iodin, with once in a while a small amount of some vegetable. The improvement is prompt and radical. He mentions one case that had been treated in vain at Paris for two years, which had yielded in a few days to this treatment. He had seen the patient recently in magnificent health, after seven years, with no restrictions as to diet necessary. This treatment is based on Ferran's chemico-clinical studies and is invariably to be preceded by careful analysis of the urine, as he states that it must be limited to those cases that are in a generally satisfactory condition, without too large a proportion of granular cylinders, and in whom the urea, the density, the phosphates and phosphoric acid are normal or above, with over 800 grams of urine eliminated in the twenty-four hours.

**Results of Thirty-Two Nephrorrhaphies for Floating Kidney.**—The operations were performed in 1894 to 1896. The immediate results were all favorable; one patient died in a couple of months from fibrinous pneumonia, and another of fatty degeneration of the heart in four months; twenty-four are in the best of health to date, and the remaining six have been lost to sight. In twenty-three cases the operation was performed for pains, seven for dyspeptic troubles and two for neurasthenic disturbances caused by the wandering kidney. The patients were all women and in all but one case the right kidney was the one involved. In three cases there had been preceding trauma; enteroptosis was present in three; hydronephrosis in three and cysts in one. Ten were nulliparæ, the other twenty-two mothers. The suppuration was always restricted to the subcutaneous connective tissue and never interfered with the growth of the kidney to the M. quadratus lumborum. The peritoneum was not opened in any case.—Tricomi at the Ital. Surg. Cong., *Cbl. f. Chir.*, December 26.

**The Latest in Organ Therapeutics; Extract of Lung Tissue.**—The *Bulletin Méd.* of December 27, publishes the results of trials and experiments made by F. Brunet with aqueous glycerin extract of the lungs of sheep. Two grams of lung tissue, fresh, shaved thin, to 60 grams of glycerin; after soaking half an hour, 120 grams of sterilized water is added and the whole filtered through linen in another half hour. The liquid is then sterilized in the autoclave, and passed through a Chamberlain bougie and glass tube into the ball in which it is kept ready for use. The doses administered internally were 10 c.c. and in injections, 2 to 5 c.mm. Ten cases of pulmonary affections were treated with it and many animals experimentally. In each case the cough diminished rapidly; the patients increased in weight, and the extract seemed to possess a general tonic property. The pus disappeared from the sputa and the sense of oppression was relieved so that the patients could sleep undisturbed. The general results of the treatment were similar to those of other organ extracts, in respect to the increase in the secretion of saliva, decrease in the amount of urine and increase of urea. Brunet therefore recommends it as extremely beneficial in liquefying bronchial expectorations, and suggests that the technique of administering it should be based upon the experience acquired with other organ extracts. He had no opportunity to observe it in cases with fever.

**Precautions in Using the Catheter.**—Patients should be instructed in the antiseptic use of the catheter, when obliged to resort to it habitually, as the most serious vesical troubles may be caused by infection from this source. We quote the directions given by Dr. Marc, republished in *Memorabilien* for December. The hands should first be washed with soap and warm water and then a 5 per cent. solution of carbolic acid or a 1 per cent. solution of sublimate be poured copiously over and through the catheter, held perpendicularly over a basin, washed off afterward with warm or cold water poured over and through it in the same way, as traces of the acid left might produce irritation in the urethra or bladder. The catheter is then dried with a clean cloth, or better, with a piece of sublimate gauze and greased with a little vaselin kept in a tight tin tube. After having used the catheter it must be washed carefully in warm soapy water, to remove all the urine, vaselin, etc., and water poured over it to remove all traces of the soap, after which the disinfecting solution must be poured over it as before and, without being wiped, it should be wrapped in a clean cloth or sublimate gauze, which should be renewed every few days. The catheter should never be wrapped in a newspaper or kept loose in a paper box.

**Chronic Intoxication from Trional.**—Gierlich describes the case of a man who had been an excessive drinker of beer and afterward used morphin habitually, to a moderate extent. To relieve his insomnia he began to take trional, 1.50 gram every evening for two months, amounting to 84 grams in fifty-six days. At the end of a month he found he had some difficulty in writing. In a few days his speech was also affected, he staggered as he walked and required a support. The movements of his members resembled those in ataxia, with trembling of his hands, feet and facial muscles. He complained of a sensation of oppression, buzzing in his ears and spots before his eyes, while his spirits and mind were profoundly depressed and weakened. Several times he had involuntary mictions and evacuations. In speaking he transposed letters and syllables, and his writing was incoherent. With the suppression of the trional gradually all these symptoms passed away in the course of three weeks, but not until the fourth to fifth week could he write as before the attack. Gierlich advises against the prolonged use of trional. The doses should be rapidly diminished or interrupted for a day or two at intervals.—*Bulletin Méd.* from *Neurol. Cbl.*, 17, 1896.

**The Toxins of Diphtheria and Tetanus in Amorphous Form.**—In the London *Lancet* for January 9, is a note, taken from the *Deutsche medicinische Wochenschrift*, stating that Drs. Brieger and Boer have succeeded in separating the toxins of diphtheria and tetanus in an amorphous form. It is easy to precipitate these toxins from their solutions by means of zinc salts, but the further treatment of the compounds formed in this way presents some difficulties, for many of the usual chemic re-agents have a destructive effect on the toxins. In the preparation of the toxin the bacilli must be cultivated in a medium containing no albumin; human urine was the fluid selected. The specific toxin of diphtheria is described by the investigators as not giving the reactions of an albumin or a peptone; it must not, therefore, be classified as an albuminous substance. Alcohol, ether, acetone, and acids destroy it, but weak alkalies do not affect it. Oxidizing substances, such as potassium permanganate, also destroy the toxin, but reducing substances have no injurious influence on it even after twenty-four hours' contact. The indifference of the toxin to substances having a reducing effect is very important, for according to the researches of Ehrlich such substances are continually produced in the organism. It appears, moreover, that the pathogenic action of the bacilli is quite different from that of the toxin. Subcutaneous injections of the bacilli produce an intense necrosis at the place of injection without the internal organs undergoing the alterations characteristic of diphtheria. It was already known that diphtheria bacilli produce local necrosis, but it now pointed out for the first time that this necrosis depends, not on the toxins elaborated by the bacilli, but on the actual bacilli themselves.

**Improved Method of Vaginal Irrigation.**—Prof. F. Ahlfeld believes that the frequency of infection from post-partum vaginal injections is due to the fact that the fluids injected wash the germs present up into the cervix as they rebound from the posterior wall. To avoid this he uses a glass canula, closed at the end, but bored with rows of small openings sloping obliquely from the top downward, so that the liquid injected is always flowing evenly and gently out of the vagina. With this instrument and the usual antiseptic precautions, these injections have ceased to be followed by accidents in his practice.—*Gaz. Méd. de Liege*, December 31.

**Amylene Hydrate in Polyuria.**—H. Brackmann had occasion to prescribe amylene hydrate for a young man mentally unbalanced, who had been affected with polyuria from infancy. 2.50 grams was given every evening, and under its influence the amount of urine fell from 7 to 2 liters a day, and the polydipsia ceased. These troubles returned as soon as the amylene hydrate was stopped, and ceased again when it was resumed. After a certain length of time permanent improvement was secured, so that the amount of urine never surpassed 5 liters a day, even without the medication. He therefore recommends the further use of this substance in diabetes insipidus.—*Semaine Méd.*, December 23.

**Garay's Method of Operating for Crural Hernia.**—The incision is made over the hernia and the sac opened and resected as usual. Then a second incision is made along the internal border of the sartorius muscle, which is opened up and divided in two by a longitudinal incision parallel to its fibers. The inside half is then cut and a lengthwise flap thus obtained. Another incision is then made in the skin, uniting the two others like the cross piece of an H, and the flap is brought through this third incision into the first, where the end is sutured to the crural arch, Gimbernat's ligament and the pectineus. The skin is then sutured. With slight modifications this method could be applied to inguinal hernia, by suturing the flap to the pillars of the internal ring. It is simpler than Bassini's method, and requires less time.—Reported at Pan-American Congress.

**The Light Perception Power as an Aid to Diagnosis and Prognosis in Diseases of the Eyes.**—The instruments hitherto in use to determine the light perception power have all failed in exactness as the standard of light used varied and the shape of the object was also a factor in the result. Henry Wall suggests a new instrument for the purpose, which consists of an oblong box, one end covered with a piece of cloth like a photographic camera. In the other end is an opening fitted with nine discs of ground glass, arranged so that they can be removed one by one. A candle stands thirty-three millimeters outside of the box in another box that prevents any flickering of the flame. After remaining five minutes in absolute darkness, the subject puts his head at the large open end of the box, one eye is bandaged and the head is covered with the cloth. The ground glass discs are then removed one by one and he is instructed to state the moment he perceives the sensation of light. The standard of measurement is the number of discs through which he can perceive the light. By this instrument the disturbances due to nicotin, alcohol, albuminuria, diabetes, etc., can be differentiated and the chances of recovery estimated. The greatest loss of light perception power is found in pigmentary retinitis.—*Rev. Gén. d'Opht.*, November, from *Opht. Review*, February, 1896.

**Improved Method of Applying the Wet Pack.**—The sensation of being bound down hand and foot by the pack is so unpleasant to some persons that the use of this method of hydriatics has

had to be renounced in many cases in which it was urgently indicated. The method has now been modified by Buxbaum in such a manner that the arms and head are left free, while yet the moisture does not escape, as is the case when only part of the trunk is enveloped. The wet cloths are wound around the trunk from the armpits downward, combined with broad pieces passing from around the trunk over the shoulders, crossing in front and behind, the same material used in all the pack. As the arms are thus left free, scientific investigations can be conducted with the sphygmograph, plethysmograph, etc. It also allows the introduction of a coil of tubing over the heart to regulate its action during the packing, conveying a liquid from a receptacle raised slightly above the bed to another on the floor. The article in the *Blätter f. Klin. Hydrotherap.* for December states that packing is one of the most excellent antipyretic methods we have, but it is contraindicated in cases of feeble heart action, or when collapse is to be feared from any cause. This disadvantage is obviated by the tubing mentioned, which removes the only drawback to its use.

**Importance of Preventive Therapeutics of Syphilis.**—Prof. E. Lang of Vienna ascribes great importance to the prompt arrest of syphilis with preventive therapeutics. In an article in the *Wien. Klin. Rundschau* of January 3, he remarks that internal mercurial medication can not be prolonged to the necessary extent, owing to injury to the digestive apparatus and the lack of precision in the doses, as it is impossible to determine the precise amount of mercury that passes through the intestines unused. Inunctions have the same disadvantage; the lack of exactness in the dosage and the varying rates of absorption in different people. Subcutaneous injections are therefore more reliable than any other method, and can be graduated to the case. The selection of the preparation is of great importance and requires discrimination, and it is necessary that the physician should be familiar with the different therapeutic methods. But whatever method is selected, the chief point is to limit the mercury and not adminster too much. *The mercurialization must be mild.* Inunctions and injections with full doses do more harm than good. The eruptions may be postponed, but the later manifestations are inevitably more severe and prove unusually obstinate. A mild preventive mercurial treatment, combined with a rational mode of life and observation of hygienic measures, is one of the most precious therapeutic measures in our possession. The imminent danger of subsequent tabes, which he connects closely with syphilis, renders preventive treatment almost imperative, and the favorable results of mild mercurial therapeutics, especially in his private practice (private patients can be traced much more easily than hospital cases), have impelled him to urge its importance upon all anew.

**Pneumopexy.**—Prof. C. Bayer of Prague, states in the *Cbl. f. Chir.*, January 16, that he was performing an operation on a 13 year old boy, for the extirpation of a large sarcoma of the right thoracic wall, when the pleura adherent to the sarcoma in one place suddenly tore. The laceration was tamponed, when it tore again and the patient began to collapse. The larger tear was sutured, the portion of the sarcoma already detached was removed and the wound left open, with iodoform dressings. The operation was resumed and completed three days later, when the pleura tore again and this time the lung collapsed entirely and sank out of sight. The patient was succumbing when Bayer seized the superior lobe of the collapsed lung with a pair of forceps and drew it out of the thoracic cavity through the large hole in the pleura and fastened its lower border by three sutures about 3 cm. apart to the periosteum of the sixth rib, which was immediately above the end of the tear in the pleura. The patient revived at once and "we saw the fixed upper part of the lung breathing regularly." The inferior lobe remained collapsed, but he refrained from attempting to suture this likewise, as he considered it best to utilize the opening for drainage. The after results were good. Dyspnea appeared only when the dressings were changed and he thinks that if he had been able to fasten the inferior lobe also no dyspnea would have occurred. The superior lobe continued its respiration to its full extent, and the lung did not seem to be at all injured by the suture. The patient is now (twenty-seven days after the final operation) recovering finely. The wound is healing perfectly with a deep depression corresponding to the defect. He considers himself justified in recommending the process of fastening the lung in this way as a simple means to restore this vital organ to its functions, when in cases of extensive injury to the costal pleura it is impossible to put an end to the pneumothorax by merely closing the wound with all haste. It is simpler than the method proposed by Tuffier and Hallion, who have succeeded experimentally in similar cases by artificially filling the lung with air through the larynx or trachea. Their experiments on dogs were encouraging, but the operation has not yet been applied to man.

**Whooping-Cough Complicated by Myelitis.**—Bernhardt reports in the *Deutsche Medicinische Wochenschrift* a case where whooping-cough was complicated by spinal symptoms. A girl aged 5 years, who had been suffering from whooping-cough for about ten days, was after a severe paroxysm suddenly seized with tonic rigidity of the lower extremities, so that walking or even standing became impossible. The power of speech and the functions of the sensory nerves continued normal. The tendon reflexes were increased and the adductor muscles of both thighs were strongly contracted. Neither fever nor cerebral symptoms were present. In the course of several weeks the child's state gradually improved, so that after two months she could move her legs and flex her knee joints fairly well, but the spasms of the muscles and the exaggeration of the reflexes continued. After four months the power of walking was regained. A year after the first illness the child was attacked with double parotitis and the spinal symptoms once more appeared, so that she could only walk with difficulty and by a succession of spasmodic movements; slight urinary troubles also developed themselves. A course of baths at the Oeynhausen springs proved beneficial, and when Professor Bernhardt saw the child some weeks ago she was able to walk, run and jump, but the reflexes were abnormally strong and micturition was more frequent than natural. No atrophy of the muscles or other symptoms of degeneration were present. Bernhardt points out that the case is probably to be classified as spastic spinal paralysis owing to myelitis caused by the specific virus of whooping-cough. He does not consider that there was hemorrhage into the medulla, because the muscular paralysis which is characteristic of this affection, did not follow the spastic symptoms. He is also opposed to the view that the case might be a severe manifestation of hysteria, because the child shows no other hysteric indications whatever. Cerebral troubles complicating whooping-cough have been sometimes described, but affections of the spinal cord and the peripheral nerves are extremely rare in this disease. Möbius published two similar cases 1889; the first occurred in a boy of 3 years of age who after whooping-cough suffered from a paresis of the arms, the legs, the cervical muscles and the diaphragm. The tendon reflexes were diminished, but sensation and the functions of the brain and the intestines were normal. The lesion was evidently slight, no atrophy ensued, and all the symptoms soon disappeared; it is not improbable that the case was only one of peripheral neuritis. In the second case a girl aged $2\frac{1}{2}$ years on the sixth day of whooping-cough was seized with paresis of the legs, loss of the tendon reflexes and incipient degeneration of the peroneal muscles. The nervous affection began with high fever, the paresis of the legs did not entirely disappear, and the case proved to be one of myelitis. It is evident, therefore, that whooping-cough is practically free from any tendency to originate affections of the spinal cord and the peripheral nerves.

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It would greatly facilitate the prompt delivery of the JOURNAL to those members of the ASSOCIATION living in large cities, if they would kindly furnish this office with their street address in those cases where it is omitted from the wrapper of their JOURNAL, as we have been notified by the postmasters of the larger cities that second-class mail matter not having street address, would be placed in the general delivery to await call.

SATURDAY, FEBRUARY 20, 1897.

## THE DIFFERENTIAL DIAGNOSIS OF LEPROSY AND SYRINGOMYELIA.

A number of observers have of late pointed out the close clinical resemblance between syringomyelia and the nervous form of leprosy—in fact it has been contended that the former is but a variety of the latter. While not going so far, it must be admitted that the differentiation is at times not easy, although a careful consideration of anatomic, etiologic and symptomatic details will usually remove any diagnostic doubt. Little difficulty is encountered in the recognition of the tuberous variety of leprosy, the characteristic cutaneous nodules being quite distinctive. The complexus of symptoms described by MORVAN as painless whitlow is not generally viewed as an independent disorder, but rather as the manifestation of some primary affection, which is most commonly either syringomyelia or leprosy. In view of the insidious and widespread dissemination of leprosy, its discrimination from the diseases which it most closely resembles is a matter of considerable importance, from both the prophylactic and the therapeutic, as well as the purely scientific point of view. The distinguishing and differential features of the disease are admirably depicted in a recent communication by LAEHR (*Deutsche med. Woch.*, Jan. 18, 1897, p. 45) from the clinic of JOLLY at Berlin.

It is generally admitted that leprosy is dependent upon the activity of the bacillus lepræ of HANSEN, which can usually be found in all recent lesions of the disease and in most old ones. The disease belongs to the group of infectious disorders, and, while not contagious in the ordinary sense, is still communicable from person to person, directly or indirectly. It further appears that infection is favored by hereditary or family predisposition, by unhygienic surroundings, by filth, by insufficiency of food and possibly by climatic influences. The first pathologic changes are to be found in the skin and consist in cellular proliferations about the cutaneous vessels, in the midst of which the bacilli are situated. This process extends along the nerves in gradually diminishing degree from the periphery toward the spinal cord. It is most pronounced in the most exposed situations, such as that of the ulnar nerve at the elbow and the peroneal nerve behind the head of the fibula. Syringomyelia on the other hand is a complexus of symptoms dependent upon various lesions of the central portion of the spinal cord resulting in structural alterations that terminate in the formation of cavities. The usual causes of this condition are developmental defects, traumatism, and inflammatory and anemic softening. There is no evidence that syringomyelia is dependent upon hereditary or family influences or that it is an infectious disease.

From the nervous form of leprosy recovery may and not rarely does take place, leaving only the secondary changes to which it has given rise. Such a result from syringomyelia is not known, death, though sometimes long deferred, being the inevitable termination, generally through some intercurrent disease. Both leprosy and syringomyelia develop insidiously, although the first symptoms noted are usually observed earlier in leprosy and are more commonly preceded by prodromal manifestations, such as headache, malaise, obscure paresthesiæ and rheumatoid and neuralgic pains. Febrile symptoms also more commonly attend the onset of leprosy than that of syringomyelia in the absence of complications. Previous residence in a leprous locality can not be viewed as conclusive evidence, and unfortunately the bacillus lepræ is not always detectable in the lesions. Syringomyelia may develop under the former conditions, while failure to detect the bacillus does not exclude the possibility of leprosy. Of great significance would be the presence of a thickened, spindle-shaped nerve, such as the ulnar or the peroneal. Only exceptionally has the bacillus been found in the blood or at the site of the inflammatory lesions in the skin.

The greatest diagnostic importance is to be attached to circumscribed anesthesia, muscular atrophy and vasomotor-trophic disturbances of the skin, bones and joints. In leprosy these manifestations appear regularly first upon the face, trunk and extremities, more commonly earlier upon the lower than upon the upper, and often upon both simultaneously. In the great majority of cases of syringomyelia the disease is located in the cervico-dorsal region of the cord and the symp-

toms first manifest themselves in the upper extremities, the lower remaining uninvolved for many years. Should the lower extremities be affected first extension to the upper does not take place until later. As a rule, the face escapes, or is involved only very late. Certain cutaneous manifestations are characteristic of leprosy, *e.g.*, multiple pigmented and partly unpigmented hyperesthetic and hyperesthetic spots; and peculiar bluish-red reticular markings upon the skin, especially in the gluteal region, which are accentuated by friction and by temperature-changes. In the course of leprosy there frequently appear acute recurrent painful swellings of the joints, ultimately leading to deformities. Arthropathies are not rare in syringomyelia, but they are mostly painless. Both leprosy and syringomyelia may be attended with extensive deformities of the fingers and toes from ulcerative processes, and also with spontaneous atrophy of bone, but these are always much more pronounced in leprosy. Sweating is absent from the cutaneous areas affected by the leprous process, while in syringomyelia hyperidrosis is common.

The muscular atrophy is much the same in both diseases, although it is more extensive in syringomyelia and is also associated with marked fibrillary twitching. With the spinal lesion the alteration in the response to electricity is more pronounced than the atrophy would lead one to anticipate. The muscular atrophy of leprosy usually involves the small muscles of the hands and feet, less commonly the parts supplied by the peripheral nerves of the forearms and legs; while the wasting of syringomyelia begins in the proximal portions of the extremities. The atrophy of leprosy corresponds in distribution with the cutaneous anesthesia; that of syringomelia may be crossed. In leprosy there is relatively early involvement of the nerves of the face, especially those supplying the orbicularis oculi, with ulceration of the cornea, epiphora, etc. If the face becomes involved at all in syringomyelia it is so late. The resulting palsy is of nuclear type, the facial muscles being affected on both sides and only those supplied by the lower branches of the seventh nerve suffering. In addition there are likely to be symptoms of bulbar palsy, such as difficulty in speech and in swallowing. If similar symptoms attend leprosy they can be readily traced to local causes, such as inflammation of the mucous membrane of the mouth and pharynx. If ocular symptoms attend syringomyelia they are usually limited to narrowing of the palpebral fissure and of the pupil, frequently upon one side only. There may also be paresis of the external ocular muscles, more particularly of the external rectus, of central origin.

The anesthesia of leprosy includes, as a rule, in addition to loss of pain-sense and temperature-sense, also loss of tactile sensibility; while in syringomyelia tactile sensibility usually escapes. Exceptionally, however, tactile sensibility is retained in leprosy and lost in syringomyelia. In leprosy the anesthetic areas vary in form and size. They are, as a rule, indiscriminately distributed all over the body. Often, however, the distribution of the anesthesia is peculiar on the extremities, involving the peripheral portions of the members like a glove or a stocking, the line of demarcation running at right angles to the axis of the limb. In rare cases the whole of the peripheral distribution of a cutaneous nerve is involved. Ths sensory changes of syringomyelia manifest themselves upon the trunk in the form of a girdle or in zonular arrangement. When present on the extremities, if the involvement be not total, the anesthesia pursues longitudinal lines; on the arms the inner or the outer margin is often affected; on the legs the anterior or posterior aspect. The sensory disturbance is segmental and corresponds to the portions of the cord involved in the disease, while the anesthesia of leprosy is dependent upon local cutaneous disease and at times upon disease of the peripheral nerves. When the anesthesia of leprosy has become so extensive as to occasion confusion, other characteristic cutaneous lesions appear that resolve any doubt in diagnosis.

Syringomyelia is often attended with slowly progressive spinal curvature (kypho-scoliosis), derangement of vesical and rectal function and spastic manifestations in the lower extremities. In leprosy the tendon-reflexes may be normal, or they are diminished or entirely wanting. In leprosy, as a rule, even before the appearance of manifestations of neuritis, it may be possible to detect peculiar spindle-shaped thickenings of peripheral nerves, especially of the ulnar and the peroneus. Not rarely the nerve-trunks are sensitive upon pressure, while in syringomyelia there is rather pressure-anesthesia. Leprosy is often attended with widespread glandular enlargement, while in syringomyelia only the glands adjacent to phlegmons or other complicating conditions of similar nature become enlarged.

From the foregoing it will be seen that while, as already stated, there is a good deal of clinical resemblance between leprosy and syringomyelia a careful analysis of all the manifestations in any given case will, as a rule, point the way to a correct interpretation of the symptoms present.

## DR. YERSIN, THE DISCOVERER OF THE ANTI-PLAGUE SERUM.

Dr. YERSIN has recently been spending a few weeks in France and has returned to Annam with resources sufficient to enable him to produce a large supply of his serum against the plague. From the French papers we learn that while Dr. YERSIN is a naturalized citizen of France, he is a native of Switzerland, having been born there about thirty years ago. He is an officer in the Sanitary Corps of the French Colonies. He has energy and courage, and at the same time is

modest in demeanor and language. His birthplace was Morges, in Switzerland, his parents belonging to a French family that was driven from France by the revocation of the Edict of Nantes. At an early age he became distinguished for his wonderful thirst for medical science. In 1885 he was a medical student at the Hôtel Dieu, under Professor CORNIL. In the hospital there was a troop of Russian peasants who had been bitten by a mad wolf. They were sent to Paris by their government to receive the Pasteur treatment. One of them died, and while performing an autopsy on the body, Dr. YERSIN cut himself. He was sent to the Pasteur Institute, where he was vaccinated, and became the friend of Dr. ROUX, who made him his associate. The famous memoir of diphtheritic toxin, which marked the first step in the discovery of the croup vaccine was signed by ROUX and YERSIN.

The young doctor became a naturalized Frenchman, and in 1888 he was appointed professor in the technical bacteriologic laboratory, where he distinguished himself by his labors over the microscope. He applied for a place as doctor in the Messageries Maritimes, and set out for Cochin China. After a certain time spent in travel, he returned to the study of pestilential diseases of the far East, and obtained an appointment as doctor in the Colonial Service, while another disciple of Pasteur, Dr. CALMETTE, founded an institute in Cochin China and discovered a vaccine against the venom of serpents. YERSIN devoted his energies to the bovine pest and the plague. He received from the Colonial Ministry an order to go to Hong Kong to study the nature of the plague, the conditions in which it was propagated and to seek the most efficacious means of hindering it from spreading. KITASATO had previously discovered the bacillus.

When he arrived there, more than 3,000 Chinese had already succumbed to the Plague. They commenced to build, with great haste, temporary sheds, because the hospitals of the country were no longer sufficient to shelter the sick.

He found accommodations in a straw hut which he had made, under the authority of the British Government, and in the center of the principal hospital. The mortality was extreme, about 95 per cent., in the hospitals.

In his first experiments he isolated and studied the bacilli of the pest. "The pulp of the buboes," he says, "is in every case filled with short stumpy bacilli with rounded ends. Sometimes the bacilli appear as if they were surrounded by a capsule. They are found in great quantities in all the buboes and ganglions of the affected. The blood sometimes contains them, but in a lesser degree. We never find them in the blood, except in rare cases, which are rapidly fatal."

With these bacilli he made cultures which he used in experimenting upon rats and guinea pigs. The first series of his experiments brought him to the following conclusion: "My observations, which were very suggestive, permitted me to suppose that the inoculation of certain varieties, but little or not at all virulent, with the specific bacilli would confer immunity upon the animals from the plague, and in that line I commenced my experiments."

He continued his new experiments in 1895, in Paris, and afterward at an isolated point on the coast of Annam, at Nha Trang, where he set up a laboratory. He inoculated the animals of the laboratory and afterward the horses, obtaining his serum for inoculating man.

The pest reappeared in China in the first months of 1896. Dr. YERSIN went there immediately with his flasks of serum. He landed at Canton, but the Chinese population would have nothing to do with the European doctor. In his autopsies he risked death, not only from contagion, but also from fanaticism. It was with the complicity of the grave digger, or the wagon driver that he was enabled to procure both the pus and the blood, and sometimes the bodies of victims of the plague.

Therefore, at Canton it was impossible for him to experiment with the new serum upon the numerous Chinese cases. But three seminarists of the mission were attacked by the disease. Dr. YERSIN cured them. Then he went to Amoy. There he inoculated twenty-three patients, out of which he cured twenty-one. After that everybody wanted to be doctored by him and all his serum gave out.

## IDIOPATHIC ARTERIAL HYPERMYOTROPHY.

It seems a fair proposition to view senility as fundamentally and essentially a process of arterial degeneration, which may occur early or late, may set in insidiously or abruptly and may advance rapidly or slowly. Whatever its mode of onset, whatever its course, its development is inevitable and its termination invariable. The changes in the vessels are followed in turn by analogous alterations in other tissues and organs of the body until in the absence of accident or complication functional and nutritive processes are interfered with to such a degree as to be incompatible with the continuance of life. These changes may from the first be widely distributed and general, or they may begin or be more pronounced in some one organ or other in consequence of local physiologic and pathologic influences. The symptoms present in a given case will be determined by the extent, distribution and intensity of the morbid process, and the clinical pictures will be correspondingly varied and variegated.

An interesting contribution to the literature of this important subject has recently been made by SAVILL (*British Medical Journal*, Jan. 23, 1897, p. 188), who

describes a condition of hypertrophic increase in the middle or muscular coat of the smaller and medium-sized arteries throughout the body in varying degree independent of, though frequently associated with, chronic renal disease. To this abnormal condition he applies the designation idiopathic arterial hypermyotrophy and he now reports two cases with autopsy in addition to ten others previously reported.

The affection is not uncommon, especially during advanced life and in those who are prematurely old. A certain degree of cardiac and arterial hypertrophy may be looked upon as normal in the aged and be unattended with symptoms, but more than this is morbid and obtrudes itself by more or less marked manifestations. Hypertrophy of the middle coat of the arteries may go on for many years without any evidence of its existence, so long as the cardiac hypertrophy compensates for the increased peripheral resistance; or the thickening of the vessels may be accidentally discovered. The change in the walls of the vessels is to be distinguished clinically from atheroma by the absence of beading and from the fact that atheroma attacks primarily the large vessels.

The characteristic feature of the pulse of arterial hypermyotrophy is its perpetual state of high tension, resulting from the increased peripheral resistance, in conjunction with the secondary cardiac hypertrophy. Another prominent feature is vertigo, coming on without warning, usually after assumption of the erect posture and lasting for but a few moments. Sometimes it is accompanied by a feeling of faintness, and syncope may actually occur. Vomiting also is usually present at some stage of the disease. Paroxysmal dyspnea is another symptom attending arterial hypermyotrophy. Headache is a feature in most cases. Hemorrhage is a frequent complication, particularly into the brain. The urine displays no distinctive features. The daily quantity is likely to be somewhat diminished and the specific gravity slightly lowered. Gangrene of the extremities and angina pectoris are observed in some cases. Dropsy is usually absent and the pulse is as a rule slow and regular, but when the heart fails the pulse becomes rapid and irregular.

The chief therapeutic indication is the reduction of high arterial tension. To this end saline purgatives and a dose of calomel are often of use. Bleeding will occasionally afford prompt relief. Rest in bed alone or in conjunction with massage and passive movements may be required to relieve the overburdened heart.

## FAT-EMBOLISM ATTENDANT UPON PHOSPHORUS POISONING.

It has always been recognized that phosphorus poisoning is attended with profound alterations in the blood, the most striking physical characteristics being its incoagulability and its change in color. The blood corpuscles have been found to be distorted and destroyed, while the amount of fat in the blood is increased. Drops of fat and fat-crystals also have been found in the blood and embolic infarcts in the lungs. The changes noted are peculiar to the subacute cases of poisoning, rather than to the extremely acute cases. By a series of experimental observations upon dogs PUPPE (*Vierteljahrsschrift f. gerichtliche Medicin u. öffent. Sanitätswesen*, 3, F. xii B., Suppl., Heft, p. 95) has succeeded in demonstrating that fat-emboli in the blood attend subacute phorphorus poisoning, but not the most acute cases. By a fortunate circumstance he was afforded the opportunity of comparing with these observations the changes noted in a girl 20 years old, who died several days after drinking an infusion of match heads. In addition to jaundice, multiple hemorrhages, fatty liver and acute nephritis, fat-emboli were found in the lungs, in both the pulmonary and the bronchial vessels. The fat from which these emboli are derived is supposed to originate partly in the fatty metamorphosis of the large parenchymatous organs, especially the liver, and in smaller degree from autochthonous fatty degeneration of the elements of the blood and of the walls of the vessels. The hemorrhages that attend phosphorus poisoning are to be attributed to the state of the blood and of the vessels in conjunction with venous stasis. It is thought, besides, that the fat-emboli are in part also responsible for the bleeding. They aid further in explaining the occurrence of superficial gangrene, which is sometimes observed in association with phosphorus poisoning. Sometimes cardiac weakness and peripheral vasomotor paresis are contributing factors.

## PROFESSIONAL COMMUNICATIONS TO PHYSICIANS SHOULD BE PRIVILEGED.

Dr. F. L. HALL of Perry, Ill., a member of the Legislature from the 34th District, January 27 introduced into the Legislature the following bill:

A BILL

For an act to provide for secrecy in communications between physicians and patients in suits at law or in chancery where the patient is a party in interest to such suit.

SECTION 1. *Be it enacted by the People of the State of Illinois, represented in the General Assembly*, That no person duly authorized to practice as a physician or surgeon shall be compelled or permitted as a witness in the trial of any cause at law or in chancery in this State wherein his patient is a party in interest to such cause, to disclose any information which may be acquired in advising or attending any patient in a professional character, and which information was necessary to enable him to advise or prescribe for such patient as his physician or to do any act for him as a surgeon, unless the consent of the patient to the making of such disclosure is first had and obtained.

All physicians in Illinois should immediately write to their Senators and Representatives in the Legislature asking them to support this meritorious measure.

Let us have a Department of Public Health!

# CORRESPONDENCE.

## "The Despised Office of Motherhood."

NEW YORK, Jan. 25, 1897.

*To the Editor:*—In the issue of your JOURNAL dated April 5, 1896, now nine months since, appeared an article entitled, "The Despised Office of Motherhood."

I have waited this long time hoping some male memberof the profession would be chivalric enough to reply to it. It is so manifestly unjust to a very large number of women.

I have been a physician for nearly twenty years, a member of the AMERICAN MEDICAL ASSOCIATION for several years and a constant reader of the JOURNAL. I also belong to the fraternity so uncermoniously assailed; hence it is my duty to take up my pen in defence of my sex.

Your writer starts out with an illustration that belittles his subject.

These creatures of fashion, whom he describes, did have one redeeming quality: They were fond of dumb animals and were evidently humane to them. He characterizes them as daughters of wealthy parents, fashionably clad, as though these were demerits.

Whereas these dolls of fashion are generally lazy and incompetent, ready to become the tools of impulse, as you know the old adage: "Satan finds plenty for idle hands to do" and it comes in here appropriately. The fault should not always be charged up againt these ignorant young women, but, to the mothers who have trained them, and neither should they be pitted against the brain and brawn of the overwhelming majority of good women, who are the earthly Saviors of the race.

I have had a large experience with women, as patients as well as every other relation of life. I can assure you I have had more women come to me to ask me to aid them in securing good healthy children than to prevent or destroy them. Now, please make that fact as emphatic and prominent as you have the converse, if you will be just. Before making such a wholesale charge, you should differentiate a little. Allow me to arraign your sex.

How many, on an average, of the men you are personally acquainted with and can vouch for, are fitted, mentally, morally and physically to become ideal fathers, particularly with that old effete idea, "That boys must be boys and sow their wild oats?" Too well do we, as physicians, know the harvest such a sowing produces. Right here I would like to refer to an article by Dr. Henry J. Garrigues in the *American Medico-Surgical Bulletin* of Oct. 31, 1896. It has so much bearing on this subject. The thanks of all honest men and women are due the doctor for having the courage of his convictions and uttering them so frankly. "Protection for future wife and children" should enlist our every energy. I can corroborate his experience with much of my own.

Here let me assert another fact: Every case that ever insulted me with the desire for assistance in destroying the product of conception, was urged and backed by the man in the case—married or single—almost without an exception. It is a weak argument to bring the devotees of fashion in contra distinction with true women. A pretty doll face and a dainty dress will catch the average man every time—as against a sensible, thinking woman. I have in my mind's eye scores of cases where worth goes unsought.

The very parties your writer condemns the (daughters of wealthy parents) are the sources from which a large majority of men seek their mates.

Some of the most flagrant cases of opposition to child-bearing are among those who profess to be Christians. That, at least has been my experience. Ministers of the gospel are as derelict in duty, on these subjects, as the members of the medical profession.

As this is for professional eyes and ears, I will state other facts, *i. e.*, the crime of onanism, more than all others, is undermining the physical and mental well-being of both sexes, as well as stultifying the moral nature. Even members of the profession are not exempt from it, I am creditably informed. And what is worse yet, they teach the pernicious habit to the laity. When I have discovered the peculiar inflammation that results in such cases and attempt to remonstrate with them and show them the dire effects of such habits, they reply: "Why! Doctor So-and-so told my husband that was the best way to prevent conception."

This course will invariably destroy all natural desire for sexual relations in women where it is persisted in for any length of time as it is only a modification of masturbation. The latter, injuring only one party, while the first named injures both parties.

I am intensely interested in righting these sexual dissipations.

To accomplish the work as it should be done, we must begin with the children. Bring them to a healthy manhood and womanhood, free from any vices, with a thorough knowledge of the physical dangers that beset them. Prevent them from learning evil habits by giving them instructions in every line necessary to this end, dietetic, hygienic, etc. It has been asserted that man can be known by the food he eats. There is more to this than we at first think. Children should only have plain substantial nourishing food without condiments, tea or coffee, and no stimulants. Then give them a chart for the future to help them steer clear of the rocks and pitfalls that wreck so many lives. Teach them moderation in all things and their duty to each other, as husbands and wives, to their children, and the world at large. Too much mock modesty of parents has wrecked more lives than any pestilence which has ever visited this earth.

Parents allow their children to learn very important physiologic facts in a very unsatisfactory vulgar fashion, begetting idle curiosity and its train of mistakes and allowing them to drift away from parental surveillance. They read pernicious books appealing to the lower and baser nature, giving them distorted ideas of those functions that should be held sacred. Is it any wonder they go wrong?

To return to the office of maternity, we want physicians as a class to interest themselves in pregnant and parturient women. Instruct them and help them to accomplish this grand work with safety and comparative comfort, and then there will not be the aversion to it that is claimed. There are many hygienic and dietetic measures which secure this end; I am thankful to say that I have tried to do my duty in this direction with much success, as I have only had to use instruments twice in twenty years. One case of flattened pelvis, where the patient did not follow directions fully, and in the other case, weak heart action caused the expulsive force to be *nil*. I would like to quote from another brave article on "Social Purity and Marriage" by Dr. E. S. Bullock of New York in *The Polyclinic* of Dec. 15, 1896, but it would make my article too long. I trust, however, every member of the profession will read and profit by it. I assert, without fear of contradiction, another fact—there is not a woman who truly loves her husband, but wants children by him, and would go through fire and water to have them, particularly when she is allowed to choose the time and season. Where this condition obtains I will show you happy contented people. When they get ready for maternity they make a business of it. The children born under such conditions are models of health, happiness and fine dispositions. I have a number of such in my clientele demonstrating fully this proposition, and furthermore children thus born will do much to lift the world of humanity out of the "slough of despond."

I teach the mothers their duty to their children in no uncertain terms in regard to the physical care as well as the mental, of their bodies and, when they reach the age that renders them

amenable to physiologic law—they shall be made acquainted with every possibility that confronts them. This can be done with tact, in a manner and in language that would not offend the most fastidious ear. With knowledge hundreds may die, but ignorance will slay its millions. The patient quoted sounded the key-note when she said: "Give him bromid, do not dose me with damiana." Men should be taught moderation and to conserve their vital energies instead of wasting them as they do now. I remember seeing it stated in a medical work some years ago, that one ounce of semen was equivalent in vital force to forty ounces of blood. When you can fully impress men with this fact you will do a little toward stemming the tide of sexual dissipation that is well nigh appalling. If every physician will do his or her duty to right this fearful wrong as they become cognizant of its existence, it will be like throwing a pebble in the brook; we may not know where the ripples will end. Leave the results to a higher power.

Your hit at the new woman was rather pessimistic, to say the least. The bicycle, properly used, is no doubt the greatest boon yet devised for women.

The very fact that it develops the chest power and the muscles, increases the circulation as well as equalizing it, should commend them to us. Out of the many women I am personally acquainted with who ride wheels, not one has been demoralized, I am sure.

That bad people use the wheel is no argument against it any more than any other conveyance. It has been asserted by a great teacher: "That nothing improves morals better or more than good health."

If you will keep track of what you dub the "new woman" the best class of them, you will find them heart and soul engaged in trying to lift humanity up, God bless them; as types take Miss Willard and Lady Somerset. It is too late in the 19th century to try to impede their progress by sarcastic remarks. They do not weigh much with thinkers, be they men or women. In regard to the men who ride like monkeys, with constant pressure on the prostate gland! Is'nt that going to invalidate the parentage from the male side of the question ere long?

Poor women are blamed for all the short-comings on this maternity question. It is high time we have some X rays (so to speak) on the conditions of the opposite sex. Women are proud and loyal as a class. When they have made a bad bargain they try to shield those who have wronged them; and declare they did not wish children, when they learned to their sorrow they could not have them, through the incompetence of their husbands the result of youthful dissipation. Such sublime heroism merits a better fate. They will have it, too, when, as Dr. Bullock says, "Our intelligent women wake to the fact that our social law was not made for women alone—but applies in all equity to the opposite sex as well." Another thing; in securing offspring it is quality we want and not quantity. Parents have no right, human or divine, to invite guests they are not prepared to care for in every respect, physically, mentally and morally. It is brains that will count in the government of the world. Let capacity measure sphere of any and all people regardless of sex. "And may justice be done, though the heavens fall." I enclose a little article from one of our late magazines. It is a refutation in regard to time, and claims the aversion to children to be in the "long ago past." Therefore the "new woman" can not be charged with it.

I reiterate, if you canvass fairly you will find the male sex are keeping the children in abeyance. If it were proper to do so I could bring ample evidence to prove what I assert. And I am sorry to say it, many of our profession are in the category. In conclusion I would say: Give good women a fair chance and you will have no cause to accuse them of "despising the office of true motherhood." Yours for truth and justice,

An old Subscriber and Constant Reader of the JOURNAL.

## The Philadelphia Meeting.

BURLINGTON, IOWA, Feb 13, 1897.

*To the Editor:*—The communication of Dr. H. A. Hare in the JOURNAL of this date should, it seems to me, suggest to the Committee on Transportation the importance of getting a longer time limit for the return tickets of those attending the Philadelphia meeting. Let us have at least a fifteen day ticket, even if we have to pay relatively more for it. Truly yours, H. B. YOUNG, M.D.

## Professorial Chairs Vacant.

PHILADELPHIA, Feb. 5, 1897.

*To the Editor:*—Please announce that the Chairs of Anatomy, Clinical Surgery and Genito-urinary Surgery are vacant in the Medico-Chirurgical College. Only the Chair of Anatomy is salaried. All applications should be addressed to

ISAAC OTT, M.D., Dean.

## Size of Dose of Tuberculin?

SEATTLE, WASH., Feb. 11, 1897.

*To the Editor:*—Will Dr. W. A. Weaver please explain what sized dose, and how he administers the tuberculin, as described in his article in the JOURNAL of January 16? Respectfully,

F. H. COE, M.D.

# PUBLIC HEALTH.

**Etiology of Ophthalmia Neonatorum.**—Chartres contributes a long article to the December *Archives Clin. de Bordeaux* to call attention to a fact he proceeds to demonstrate, viz., that the serious ophthalmias are those produced by streptococci or by an association of streptococci and gonococci, or by these two and others. The gonococci alone are comparatively harmless and yield to treatment. The treatment should be prompt and powerful, consisting of copious irrigations with potassium permanganate, lime, boric acid and cauterization with nitrate of silver. This combination acts on all the various species of microbes which may be producing the ophthalmia. He concludes by insisting on the necessity of bacteriologic investigation.

**The Milk Typhoid Epidemic at Kirkcaldy, Scotland.**—In the report bearing on the late typhoid epidemic at that place, recently submitted by Sir Henry Littlejohn of Edinburgh, he states that in this epidemic just brought to a close there were 10[illegible] cases, with a mortality of 20, or 10.4 per cent. The origin of the outbreak was, in his opinion, clearly traced to a dairy. The Kirkcaldy town council have awarded to Dr. Mackay, medical officer of health, and Dr. Curror, £100 each, and Mr. Braid, sanitary inspector, £50, for the services rendered by them during the epidemic. Sir Henry Littlejohn, in his report highly praises the ability and energy displayed by Dr. Mackay in coping with the epidemic.—*British Medical Journal.*

**Governmental Regulations Against Imported Contagious Diseases of Animals.**—The agricultural department has been taking steps to keep out of this country all animals that can in any possible way bring contagious diseases into the United States. Secretary Morton issued about January 20, a set of regulations providing for the inspection and quarantine of all animals imported from Canada into the United States, and the Federal officers at all the ports on the northern boundary have been instructed to look out for all future imports of cattle, horses, sheep, etc. Animals found infected with any sort of contagious disease are to be killed without compensation to the owner, or returned to Canada. The regulations provide that all animals shipped into this country from Canada must be accompanied by an affidavit made by the owner or importer, declaring the purposes for which the animals are imported. Horses for temporary stay, such as pleasure, exhibition and racing stock, are to be admitted without inspection.

**Liable for Pay of Nurse.**—While it may be that a request made by one person to perform service beneficial only to another may not alone raise the presumption of his intention to pay for it, when it appears that the requested service has been performed pursuant to such request, he, in the absence of authority from or ratification by such other person, is charged upon an implied promise to pay the person so employed. This is illustrated in the case of Ludlum v. Couch. The plaintiff who may be deemed to have been a professional nurse, was

requested by the defendant, a physician and village health officer, to go to the residence of one Peter Post, some of the members of whose family were sick with diphtheria, and nurse them. There was no evidence tending to prove that he was authorized by Mr. Post to employ the plaintiff for him or in his behalf, or that he was the family physician of Post, or had such relation to him. Under these circumstances, the appellate division of the supreme court of New York holds, Dec. 8, 1896, that the request of the defendant to the plaintiff was an employment of her to perform the services in question, and the only employment under which she performed them.

**Encourage Every Worthy Health Officer.**—Dr. Pemberton Dudley, in *Public Health*, January, expresses the opinion that the health inspector does not, as a rule, receive the coöperation to which he is entitled. He says, speaking to an audience of laymen and physicians: "We physicians—and we patients—ought to be very scrupulous and very intelligently careful about the way in which we receive and encourage and coöperate with our local health inspectors. They come to us when our homes are invaded by pestilential disease, just as much in the garb and character of a true friendship, as do our physicians and nurses. They ought to be welcomed as such, and their efforts furthered to the extent of our ability. There is, in the minds of some persons, *a disposition to attach to the health officer and his inspectors, the responsibility for all the inconvenience and annoyance incident to the sanitation of contagious diseases, just as there are people who censure the weather bureau for all the cyclones.* An intelligent patient of mine, into whose house scarlet fever had entered, determined that not a suggestion or direction of the inspector should fail of her cordial and energetic support and execution. Promptness, energy and persistence characterized every effort she made to prevent the disease from reaching other people. As a consequence, her three other children escaped the infection and, after a period of anxiety such as none but the maternal heart can know, her sick one recovered. Subsequently the inspector said to her something like this: 'Madam, your child caught the disease through somebody's mismanagement; but no other mother's child caught it through yours. So far as you had to do with the progress of this epidemic, it never got past your house, and if everybody would do as you have done, the disease would be quickly stamped out. No failure on your part has filled any other woman's home with mourning.' 'Well,' said the relieved mother, 'what a comfort it is to know that!'"

**Valid Ordinance to Secure Pure Milk.**—Chapter 203 of the General Laws of Minnesota of 1895, entitled "An act relating to the inspection of milk and of dairies and dairy herds, and to provide for the licensing and regulation of the sale of milk in cities," provides that the city council of any city may, by ordinance, provide for the inspection of milk and of dairy herds kept for the production of milk within its limits, and issue licenses for the sale of milk within its limits, and regulate the same, and may authorize and empower the board of health to enforce all laws and ordinances relating to the production and sale of milk for sale or consumption within such city, etc. This, the supreme court of Minnesota holds, in State v. Nelson, Nov. 6, 1896, authorizes the passage of an ordinance, such as one passed in Minneapolis, providing that any person desiring a license to sell milk in the city shall file with the commissioner of health of the city an application therefor, stating, among other things, the location or place from which the applicant obtains the milk, and, if he is not a producer of milk, then the name of the person from whom he obtains his milk, and also requesting the city to inspect his dairy and dairy herd, or the dairy or dairy herd of the person from whom he obtains his milk, for the purpose of carrying out the provisions of the ordinance, and providing that the commissioner of health shall inspect such dairy and dairy herd, and cause an examination by the veterinarian of the department of health to be made of every animal producing milk for sale within the city, belonging to the applicant or the person from whom he obtains his milk, and further providing for the tagging of each animal examined and inspected. Such an ordinance, the court holds, has no extraterritorial operation, because it requires the applicant for a license to sell milk within the city to consent that the dairy herd from which he obtains his milk shall be so inspected, although such dairy herd is kept outside the city limits. The provisions in that regard go only so far as it is reasonably necessary to prevent the milk of diseased cows being sold within the city. This inspection is wholly voluntary on the part of the owner. If he does not choose to submit to it, the result merely is that he or the one to whom he furnishes milk can not obtain a license to sell within the city. So reasons the court. It also holds that a requirement of the ordinance that the applicant shall consent, as a condition precedent to obtaining such license, that the animals from which he obtains his milk shall be subjected to the "tuberculin test" is not unreasonable. Whether a license from a city under an ordinance passed pursuant to the foregoing statute is, as to the sale of milk in such city, a substitute for the license from the State dairy commissioner, provided for in Laws 1889, chapter 247, or whether it is merely supplemental and additional, the court says it does not decide. But, in either view, it holds the ordinance in question authorized by the act of 1895.

**The Isolation Hospital Supplanting the County Pest House.**—Dr. Benjamin Lee, secretary of the Pennsylvania Board of Health, has addressed that Board recently, regarding the replacement of the old style pest house by something more modern and attractive. He said that while almost all of our cities and towns of any size have some kind of a hospital, which they usually call a pest house, most unfortunately it is in reality a smallpox hospital which can be made use of in case of epidemics of that disease. "The institution, however, from its very name is looked upon with horror by the community. People would rather die at home than go to a pest house to be restored to health. I was greatly pleased in visiting your city yesterday to find so admirable a detached hospital for the treatment of contagious diseases. I found in your hospital private wards intended for the use of persons in good circumstances—not those who desire to be treated at the expense of the community, but persons of means suffering from illness, which could be best treated at a hospital, as is the case with the vast majority of surgical cases, so that such persons could avail themselves of the best medical skill under the best environment, with the best nursing, and in every way the best opportunity for recovery. You have also in your isolation hospital a hospital to which any mother should not object to going with her child suffering from a contagious disease. In so doing she would accomplish a number of good results for her own family as well as for the entire community. She would avoid the risk of contagion to the other children and other members of her family, and would make it unnecessary for the house to be kept quarantined. The breadwinners of the household would thus be enabled to continue to attend to business as usual. There is a movement on foot at present in Philadelphia which took its origin with the women of that city, through the association known as the 'Women's Health Protective Association,' for establishing a hospital of this kind to be reserved entirely for pay patients. It is intended to establish a hospital with every comfort and every facility for the treatment of contagious diseases, and every precaution for preventing the escape of germs of these diseases outside of its walls. It is intended, if I understand it, that while this hospital shall be under the supervision, to a certain extent, of the Board of Health of the city, that is to say, its officers must conform

strictly to the regulations of the Board of Health, yet, if the parents or relatives of the sick person so desire, such person may enjoy the attendance of the family physician. It would be necessary in this case for the physician also to be subjected to the regulations of the Board of Health, but the arrangements would be such that these could be followed with very little personal inconvenience. I feel that this is a matter of very great importance, and one that all representatives of boards of health and of local municipalities should consider. The State Board of Health has adopted a resolution recommending to the municipal authorities of every center of population of 25,000 or upward, that they should establish a separate hospital for the treatment of such affections."

## BOOK NOTICES.

**Anomalies and Curiosities of Medicine:** Being an encyclopedic collection of rare and extraordinary cases and of the most striking instances of abnormality in all branches of medicine and surgery, derived from an exhaustive research of medical literature from its origin to the present day, abstracted, classified, annotated and indexed. By GEORGE M. GOULD, A.M., M.D., and WALTER L. PYLE, A.M., M.D. Imperial octavo, 968 pages, with 295 illustrations in the text and 12 half-tone and colored plates. Price, cloth, $6 net; half morocco, $7 net. Sold only by subscription. Philadelphia: W. B. Saunders, 925 Walnut Street. 1897.

We read the following in the author's preface with surprise: "A curious case is invariably reported and the insertion of such a report is generally productive of correspondence and discussion with the object of finding a parallel for it.

"In view of all this it seems itself a curious fact that there has never been any systematic gathering of medical curiosities. It would have been natural that numerous encyclopedias should spring into existence in response to such a persistently dominant interest. The forelying volume appears to be the first thorough attempt to classify and epitomize the literature of this nature."

The surprise deepens when we examine the bibliography and find that the names of Millingen and Eve have escaped mention.

Millingen, a British army surgeon, in 1837 wrote a work which was published in two volumes of 400 pages each, by Bentley in London. This work was entitled "Curiosities of Medical Experience." It was republished in Philadelphia by Haswell, Barrington & Haswell, in a single volume in 1838. There was little attempt at classification. Paul F. Eve in 1856 wrote a work, "A collection of Remarkable Cases in Surgery," a book of 858 pages, which was published by J. B. Lippincott & Co. in 1857. This extensive work was classified on the anatomic plan, that is to say all the cases were arranged according to the region injured or diseased.

In Eve's book the cases are reported as nearly as possible in the language of the original report. In the book under review a digest is made. Fournier's cases which he collected in the "Diction. des Sciences Médicales," article "*Cas rares*," is apparently made use of. Mr. Walter Dendy's pamphlet on the "Wonders Displayed by the Human Body," quoted by Eve, the writer has not seen, nor is it quoted by Gould and Pyle, nor in the Great Index Catalogue of the Library of the Surgeon-General's Office.

The scope of the work under review is much greater than that of Millingen, whose cases are irregularly arranged, and greater than the work of Eve, who limited his collection of cases to those of surgery.

The claim of the authors to have the only collection of rare cases in all branches of medicine holds good, and we can but admire alike the work itself and the wonderful industry that produced it. The book is more than a mere collection of rare cases, for the cases are not only systematically arranged, but instructively commented upon. Conditions, such as obesity, are noted. There is also a chapter on epidemics. The illustrations are excellent.

The authors have rendered a very great service to writers and teachers, and many will have their labors greatly lightened by a reference to this storehouse of information. Practitioners will find here many a companion to the case that has puzzled them for months, and indeed there is no class of the profession who will fail to find the work useful.

**Architecture of the Brain.** By WM. FULLER, M.D. Illustrated; 8vo, cl., pp. 182. Grand Rapids, Mich. 1896.

This excellent work deserves to become very generally known. The plates are as good as they can be in black and white, and it is the most recent addition to the copious modern literature on the anatomy of the brain. The author has been a diligent and enthusiastic student of anatomy since his college days; for a number of years he was a successful teacher of this, the most important fundamental branch of medicine, and although he has lived for a number of years in a rural city, he has pursued his favorite study with an ardor and originality that are refreshing in these days when physicians so generally employ all their time and energies in acquiring and increasing their practice. This treatise presents many features of great merit. The description of the anatomy of the brain is concise and clear.

The descriptions have been made "from dissections by the author, and have been carefully verified by comparison of longitudinal and lateral dissections, and by sections, all of which agree in proving the correctness of the representations herein described.

"These dissections have been permanently recorded by castings in plaster and the sections have been photographed and plates made, so that both the casts and the plates can be repeated at pleasure, thus enabling any who may take an interest in the anatomy of the brain to do so." They may also purchase reproductions of the casts if they wish.

The plates are interesting and instructive object lessons in studying the text, splendid substitutes for the actual dissections. The book will be alike valuable to the student and the practitioner; the former will find it the best instructor in obtaining an accurate knowledge of the structure of the brain and the latter the safest and simplest guide in locating cerebral lesions and injuries.

**A System of Practical Medicine by American Authors.** Edited by ALFRED LEE LOOMIS, M.D., LL.D., and WILLIAM GILMAN THOMPSON, M.D. Volume I. Infectious diseases. Illustrated; 8vo, cl.; pp. 985. New York and Philadelphia: Lea Bros. & Co. 1897.

The precision and accuracy of modern medicine in its practical applications have become such that few text books on systems accurately represent its present position.

"Such considerations," says Dr. Thompson, "render obvious the necessity for a systematic and practical work covering the entire field of general and specific medicine in its foremost state of development. To meet this want the late Dr. Alfred Lee Loomis, M.D., LL.D., undertook the authorship" and associated Dr. Thompson with him in its charge.

By omitting topics on hygiene, bacteriology, gynecology, *et cetera*, it "has been found possible to present a succinct and complete account of medical practice in its latest aspects, each article being a clinical monograph and proceeding from the cause and nature of a disease to its diagnosis, prognosis and treatment."

In the preparation of the work, the late Professor Loomis "secured the authors, apportioned their subjects, decided the arrangement and classification of the entire work, and discussed with Dr. Thompson many important details."

An inspection of the book shows that Professor Loomis made no mistake in choosing his associate editor, for the work is one which will reflect high credit on American medicine.

The contributors to the first volume are: I. E. Atkinson, M.D., Baltimore; John M. Byron, M.D., New York; Warren Coleman, M.D., New York; George Dock, A.M., M.D., Ann Arbor, Mich.; A. H. Doty, M.D., New York; Isadore Dyer, M.D., New Orleans; J. Crozier Griffith, M.D., Philadelphia; Walter B. James, M.D., New York; Thomas S. Latimer, M.D., Baltimore; Wm. Osler, M.D., Baltimore; Wm. Hallock Park, M.D., New York; P. Gervais Robinson, M.D., LL.D., St. Louis; George M. Sternberg, M.D., LL.D., Washington; James Stewart, M.D., Montreal; Wm. Sydney Thayer, M.D., Baltimore; Wm. H. Welch, M.D., Baltimore; Wm. M. Welch, M.D., Philadelphia; Hamilton A. West, M.D., Galveston; J. C. Wilson, M.D., Philadelphia.

The articles in this volume are: 1, Malaria; 2, Dengue; 3, Enteric Fever; 4. Typhus Fever; 5, Relapsing Fevers; 6, Yellow Fever; 7, Cholera; 8, Dysentery; 9, The Plague; 10, Influenza; 11, Epidemic Cerebro-spinal Meningitis; 12, Erysipelas; 13, Pyemia; 14, Septicemia; 15, Smallpox and Varioloid; 16, Vaccinia; 17, Varicella; 18, Scarlet Fever; 19, Rubeola—Measles; 20, Rubella; 21, Diphtheria; 22, Pertussis; 23, Epidemic Parotiditis: 24, Tuberculosis; 25, Syphilis; 26, Leprosy; 27, Tetanus; 28, Infectious Diseases of Obscure Nature.

The limitations of space will not permit us to do more than to content ourselves by a general and unqualified commendation of the book. We regret that the editor ignores the metric system of dosage in the prescription writing.

The publishers have done their part well.

**Ophthalmic Operations as Practiced on Animals' Eyes.** By CLARENCE A. VEASEY, A.M., M.D. With 56 illustrations; 12mo, cl., pp. 99. Philadelphia: The Edwards & Docker Co. 1896.

"This little work," says the author, "has been prepared in the hope that it may prove of assistance to those beginning the study of ophthalmology, by enabling them to become acquainted with the technique of the various operative procedures through practice on animals' eyes, thus removing a certain amount of timidity and affording a larger experience and more confidence when attempting the operations on the human eye."

Lest some antivivisectionist might set up a prolonged howl, let us take note that the author recommends sheep's and pigs' eyes removed from animals recently slaughtered. The book is well conceived and well executed.

**City of Chicago Second Annual Report of the Civil Service Commission** to His Honor, the Mayor, for the year ending Dec. 31, 1896. JOHN M. CLARK, R. A. WALLER and CHRISTOPHER C. HOTZ, Commissioners. Cl., 8vo, pp. 286. Chicago: Printed for the Commission. January, 1897.

The successful working of the Illinois Civil Service law is a source of gratification to all who have had the pleasure of witnessing the results of the Commissioners' labor in the city of Chicago.

It is evident that the much neglected science of government of our great cities is being rescued from obscurity and the problem is rapidly being solved.

The operations of the Medical Board are creditable. It will be remembered that this board was recommended to be appointed by the Chicago Medical Society, and the commissioners very wisely accepted their recommendation.

**La Foi qui Guerit.** Par T. M. CHARCOT. Tome VIII de la Bibliothèque diabolique in—8o, de 48 pages. Papier vélin, prix 2 fr.; papier Hollande, prix 3 fr. 50; papier Japon, prix 4 fr. Publications du Progrès Médical. Paris, 14 Rue des Carmes.

This brochure, edited by the distinguished Bourneville, is one of the last works of the illustrious Charcot, and is published by permission of Madame Charcot.

This is a scientific exposition of the faith cure; the author freely concedes that certain cases belonging to the domain of hysteria, are sometimes cured by "suggestion," and the philosophic reasons for such a result are given in detail. It is like carrying coals to Newcastle to praise anything written by a master of his art, and we can not do better than to advise our readers to get the pamphlet and read it for themselves.

## NEW INSTRUMENTS.

### FORMALDEHYDE GENERATOR.

The apparatus shown in the above illustration has been designed by Chas. Truax, Greene & Co., for the safe, convenient and economic production of formaldehyde by the oxidation of methyl alcohol. This is accomplished by decomposition of wood alcohol and without the use of an open flame, and where used for disinfecting tightly closed apartments, it is free from the possibility of fire while in operation.

It is convenient, economical and simple in construction, compactly made and requires no nice manipulation to secure the desired result. An apartment having a capacity of 2,500 cubic feet may be thoroughly disinfected by the generator, together with the infected furniture, bedding, etc., with one filling of the reservoir and without previous preparation of the room or its contents.

Formaldehyde ($CH_2O$) in its gaseous form answers fully the above requirements, as it possesses the properties of ready diffusibility and great power of penetration.

It may also be used in connection with a sterilizer constructed for the purpose of sterilizing instruments and surgical dressings. It is destructive of all pathogenic organisms without acting injuriously on the higher forms of life, or on the material or color of the articles subjected to its action.

## NECROLOGY.

THOMAS G. ROWAND, M.D., Philadelphia Medical College, 1850, died in Camden, N. J., aged 68 years, on January 25. In 1862 he was an assistant surgeon in the New Jersey Infantry Volunteers, 24th regiment serving with them until their muster out. Notwithstanding his modesty he held many positions of trust, including a professorship in the University Medical College of Pennsylvania, a deputyship in the Quartermaster General's Department of the New Jersey Militia, two terms as coroner of Camden, N. J., 1864 and 1868, and president of the Camden Board of Education, 1867–68. In his earlier career, he served acceptably as a hospital surgeon in the third division of the famous Second Corps at Potomac Creek, Va.

SAMUEL H. CHARLTON, M.D., of Seymour, Jackson County, Ind., one of the oldest and best known physicians in Southern Indiana, died Jan. 12, 1897, of uremia, aged 70 years. He was a graduate of Louisville Medical University, was assistant sur-

geon of 6th Indiana Regiment; in 1878 was president of the Jackson County Medical Society, also president of Mitchell District Medical Society; in 1881 was first vice-president of the Tri-State Medical Society of Indiana, Illinois and Kentucky; in 1882 was vice-president of the Indiana State Medical Society and in 1888 was president of the same; in 1887 became member of International Medical Congress, which met at Washington, and served as a member of the council of the Section on Diseases of Children; in 1890 was president of the U. S. Examining Surgeons on pension board. He was possessed of a genial, cordial nature, qualities that endeared him to all who knew him.

HENRY HARTSHORNE, M.D., University of Pennsylvania, 1845, died at the age of 73 years at Tokio, Japan, February 10. He was a graduate of the Haverford College in 1834. He was elected professor of the Institute of Medicine in the Philadelphia College of Medicine in 1853, and in 1859 was chosen professor of practice of medicine in the University of Pennsylvania. He became professor of hygiene in the latter institution in 1866, and in 1867 was elected to the chair of organic science and philosophy in Haverford College. He also held professorships in the Pennsylvania College of Dental Surgery, Girard College and the Woman's Medical College of Philadelphia. He was the first person to ascertain by experiments on himself and others in 1848 the safety and effects of the internal use of chloroform. Six years ago Dr. Hartshorne went on a tour of Japan. He remained a couple of years, and formed a liking for the country. Returning to the United States, he consented two years ago to return to labor in connection with the missions of the Society of Friends. He was a brother of vice-president Charles H. Hartshorne of the Lehigh Valley Railroad.

ROBERT M. DENIG, M.D., Jefferson Medical College, 1838, died January 17, in Columbus, Ohio, to which he came in 1849. He was at one time Professor of Medical Jurisprudence in the Starling Medical College, and later on became lecturer on Diseases of Children in the Columbus Medical College, which position he held until that institution united with the Starling College. He retired from active practice about five years ago.

CHARLES W. COOPER, M.D., Northampton, Mass., where he was in active practice for twenty-five years, was lost overboard from the Hamburg Line Steamer Columbia about 300 miles from Sandy Hook, during the first week in February. The vessel was stopped, but he never appeared above the surface. His health becoming impaired he made a trip to the Mediterranean about four month ago with his brother-in law, Dr. Fred Tuckerman of Amherst. He was a graduate of Harvard Medical College, in 1877.

ABNER C. JONES, M.D., of Muncie, Ind., died January 28, aged 48, of acute Bright's disease. Dr. Jones enjoyed the distinction of having been the youngest soldier that served through the war. He was an ex-commander of the G. A. R.

ALBERT WELLS KILBOURNE, M.D., New York University Medical College, 1874, a practitioner of Albany, N. Y., of twenty years' standing, died January 14. Three years ago he returned to Liberty, N. Y., where he was born in 1851. A cardiac aneurysm was the cause of his death.

BENJAMIN B. ADAMS, M.D., University of Georgetown, D. C., 1876, died suddenly in Washington, D. C., January 25, aged 46 years.

JOHN KIRKER, M.D., Bellevue Hospital Medical College, N. Y., 1864, died at his home in Allegheny City, Pa., January 23. He was a member of the AMERICAN MEDICAL ASSOCIATION and had served as a surgeon in the Union forces during the war.

CHARLES A. STARK, M.D., Dartmouth Medical College, N. H., 1884, died at his residence in Marshfield, Mass., January 22, aged 35 years. He was for a time on the staff of the New Hampshire Asylum for the Insane, located at Concord and subsequently practiced in Manchester, N. H. He returned from Louisiana in 1889 and in the following year established himself at his last address.

WILLIAM A. CAREY, M.D., University of Pennsylvania, 1886, died in Philadelphia, Pa., January 29, aged 35 years.

ANDREW L. VON WITTKAMP, M.D., Jefferson Medical College, 1876, died in Philadelphia, February 2, from a sequence of cerebral hemorrhage. He came from Germany when an infant.

EUGENE Z. BRIEGVOGELLE, M.D., New York University, 1883, died at his residence, New York City, Feb. 12, 1897, of pneumonia, in his 47th year.

PHILIP HASTINGS FULLER, M.D., University Vermont, 1885, died at his home in Brooklyn, N. Y., of renal disease, February 12. He was born near Painesville, Ohio, in 1861 and came to Brooklyn with his parents when still a child.

## MISCELLANY.

**The Laryngoscope**, published in St. Louis, has been selected as the official organ, for the year 1897, of the Laryngological Section of the New York Academy of Medicine. This selection, and the great probability of the same journal being chosen by other laryngological, rhinological and otological societies as their official organ, would indicate that the *Laryngoscope* has become what its proprietors stated they intended to make it, *i. e.*, the American Journal of Record for the specialties represented.

**He Always Had Some "Small Change About Him."**—A soldier wounded in the Franco-Prussian war recently evacuated a thaler through the rectum which had been in his body over twenty-five years. The bullet passed through his purse in his breast pocket and when it was extracted at the time a smaller coin was found with it. His health has since been good. The case has led to considerable discussion as to how the thaler could have found its way from the level of the seventh rib into the intestines without noticeable disturbance.—*Deutsche Méd. Woch.* December 25.

**Orchitis Implanted upon Prostatic Hypertrophy.**—Dr. J. R. Gibson of Paisley writes to the *Lancet* concerning a case of the above character. His case was that of a man aged between 50 and 60 years, afflicted with enlarged prostate gland and requiring the use of the catheter before any urine could be drawn off, and who recently became afflicted with acute orchitis of one testicle, the orchitis being probably caused by the irritation of the catheter, as great difficulty was experienced in passing it. Almost immediately after the onset of the orchitis he could pass urine more or less freely, an act he had not performed for over a year, and the whole bladder symptoms underwent great improvement, an improvement which I am glad to state has continued since the orchitis got better.

**Artificial Diphtheria Antitoxin.**—Smirnoff has been continuing his efforts to produce an artificial substitute for the usual antitoxin and has succeeded. The liquid he prepares for the purpose is not so effective as antitoxin in the early stages of the disease, but later, when antitoxin loses its power, the artificial seems to display marvelous efficacy. It also works irrespective of the amount injected. His theoretical conclusions from his investigations are: 1, that antitoxin is only an oxidized toxin; 2, the electric current is only an excitant that can be modified according to the nature of the agent employed; 3, it acts through the chemic processes that occur during the decomposition of the salts. He is hopeful that it will be possible to manufacture antitoxins for tuberculosis, anthrax, etc., much cheaper than by the present methods. His process consists in electrolyzing toxin-bouillon in a U-shaped tube with a faucet at the lowest part, after the addition of .05 per cent. NaCl. The current passes through carbon electrodes. These

re replaced with silver electrodes, and .05 per cent. potassa added to the liquid. The plates have to be changed once an hour, as the chlorid of silver that forms on them prevents their action. Four or five plates are necessary to neutralize all the chlorid. After 200 c.cm. of toxin have been thus electrolyzed for seven hours an antitoxin results that will cure guinea pigs fifteen hours after infection. Electrolysis for eight hours results in an antitoxin strong enough to produce its effect at the commencement, but too weak for later stages. If 1 per cent. of NaCl is added, electrolysis for three to four hours produces a very active antitoxin. This process produces antitoxin freed from every trace of toxins and of a standard strength and efficiency.—Russian correspondence of the *Presse Méd.* of December 23.

**An Anecdote Regarding Erichsen.**—The *Lancet* tells the following curious incident in the life of the late Sir John Erichsen: A serious fracture case occurred in a large hotel in the country and Dr. McNichol, of Dalmally, was called to it. When setting the limb, an old gentleman came to him and said he would be glad to give any assistance required, as he too was a medical man. He was thanked by Dr. McNichol and asked to use extension, etc., and to all the local man's directions the old gentleman gave ready obedience. The fracture was set and an adjournment made to the smoking room. "I must thank you for your assistance, sir." "Not at all; I was glad to be able to help in the matter. I think the case will do well, as the setting of the limb is perfect. That's my card." Dr. McNichol saw "John Eric Erichsen" on the card, and afterwards said he never felt so helpless in regard to making a remark fitting the occasion. "I'm glad," he said, "the fracture is set properly, for I learned the method out of your own book." There was a good humored laughter, and as they say about other pleasing functions, a happy evening was spent. Within a few weeks of each other they are gone, McNichol regretted in his small sphere as was Erichsen in his larger.

**The Paris Night Medical Service.**—According to *Médecine Moderne*, the public night medical service of Paris is maintained at a cost to the city annually of 145,000 francs, or about $29,000. In return for this service the patients paid the city but 3,217 francs. One hundred and thirty-five doctors are employed, the yearly salary of each being 600 francs, or $120. The London *Lancet*, January 16, in treating of a "strike" on the part of some of the physicians of this service, shows that the latter has in Paris, as elsewhere, been the subject of abuse. The service is highly appreciated by the population of Paris, but it is now maintained that persons who have means to pay for medical advice have availed themselves of its benefits. Such abuse, it is true, does not, as in the case of hospital abuse in England, represent a loss to the medical profession, for the medical men are paid eight shillings per visit by the municipality, but it is loss to the tax payers. The latter are therefore interested in preventing abuse, whereas if the proposal of the Prefect of Police were enforced there would be no check to the abuse. If the medical officers were paid a fixed salary it would not matter to any one except to the medical men themselves how many patients resorted to the night service or whether these persons were rich or poor. As it is, the payment being per visit, the authorities have every interest to watch and see that none but the poor avail themselves of the medical officers' service. It is proposed that the tax collectors should be employed to investigate the cases.

**Two Surgeons and Their Fees.**—Alfred Louis Velpeau, the greatest French surgeon of his time, had a severe lesson read to him by the mother of a patient, a young girl whose life he had saved in a critical case of croup. The mother brimming over with gratitude, went to see the famous surgeon, an abrupt and somewhat disagreeable person at the best of times, and reputed to be afflicted with inordinate greed. "I have come to thank you for what you have done for us, and to offer you this as a token of our obligation," she said, placing a beautifully embroidered purse on Velpeau's table. Velpeau scarcely took the trouble to look at it. "I accept, Madame," he remarked in his ungracious way; "but, of course, this is without prejudice to my honorarium, which comes to 3,000 f." Thereupon the lady took up her present. "I am afraid I made a mistake then," she laughed; "there are five notes of 1,000 f. each in there. This makes us right then, Monsieur." And pocketing two out of the five slips of blue paper, she bowed, "I have the honor to wish you good morning." Sir Astley Cooper was wiser in his generation. The largest fee he ever received was in a less delicate but more original manner. He had been attending in his capacity of surgeon a West Indian millionaire, named Hyatt, with Drs. Lettsom and Nelson as physicians. The treatment was most successful, and in his joy Hyatt bestowed 300 guineas on each of the doctors. "But you," exclaimed the grateful patient, addressing Sir Astley, "you shall have something better." With this he flung his nightcap at the eminent operator. "Sir," replied the latter, "I'll pocket the affront." And he slipped the "affront" into his pocket. It contained a draft for 1,000 guineas.—*New York Times.*

**Malpractice Question for the Jury.**—Moratzky v. Wirth was an action to recover damages which the plaintiff alleged that she had sustained by the defendant's malpractice, while attending her as her physician during her illness due to a miscarriage, in not discovering and removing a remnant of the placenta. Unexplained, the evidence was sufficient to justify the conclusion that the defendant, in the exercise of that degree of care and skill which the law exacts of a physician, might and ought to have seasonably discovered and removed the remnant of the afterbirth. Wherefore, the supreme court of Minnesota holds, Dec. 28, 1896, that the question of his negligence in the premises was one for the jury, and that the trial court erred in dismissing the action. The evidence, it says, was practically plenary that the failure to remove the afterbirth materially aggravated and increased the blood poisoning of the plaintiff, even if it was not proved that it commenced after the defendant was called to treat her, and prolonged and intensified her pain and sickness. Such being the case, if the defendant was negligent in not removing the placenta, the court holds that the plaintiff was entitled to damages in some amount, and the case should have been submitted to the jury.

**Privilege of Burial Can Not Be Limited to a Class.**—The fact that the unlimited burial of the dead within a city is dangerous to life and detrimental to the public health may be a sufficient reason for the enactment of an ordinance fixing a term after which such burials shall cease within certain portions of the city; but, while burials are permitted within a district, the supreme court of California holds, Ex parte Bohen, Dec. 17, 1896, the privilege can not be limited to one class of citizens and denied to another class within the same district. In other words, the police power is to be exercised for the good of the entire public, and any restriction of the rights of the individual by virtue of this power must extend to all the individuals who might otherwise exercise the right. The right to prohibit burials within a certain district rests upon the proposition that any burial within that district is injurious to the public health and an ordinance permitting burials within a district to an extent greater in number than it prevents, as one allowing burial in lots already sold which have a greater aggregate capacity than those unsold wherein it is prohibited, can not be upheld as an exercise of police power. Nor can an ordinance forbidding the burial of human bodies within the city, or upon any designated portion thereof, as upon unsold cemetery lots, be sustained, if such burial be permitted upon other (sold) lots similarly situated; and the owner of land can not be restrained from selling it for the purpose of being used as a place of burial, if burial therein is not at the time forbidden.

### Cincinnati.

AT THE MEETING of the Academy of Medicine Dr. Charles A. L. Reed read a paper on the "Sequelæ of Cholo-lithiasis."

Dr. J. W. PRENDERGAST, the health officer, is preparing an ordinance to prohibit promiscuous expectoration in street cars and other common carriers. He is also vigorously prosecuting his reforms in the direction of a pure milk supply for the city. His intention is to have the cows examined for tuberculosis by means of the administration of tuberculin, and then have them kept under rigid observation. A bacteriologic bureau as a department of the city health department, is another one of Dr. Prendergast's many progressive and commendable ideas.

THE ANNUAL REPORT of the staff of the Cincinnati Hospital was recently submitted and it shows that there were 4,812 patients discharged from the hospital wholly or partially recovered. The total number of patients received at the hospital was 5,254. This was an increase of 35 over the year previous. The death rate was 8.4 per cent. Of this Dr. Dandridge says it is to be understood that no less than 98 patients were received in a dying condition and did die within twenty-four hours. The pressing need of more commodious quarters for the contagious diseases, nurses, and another operating room was emphasized by President Dandridge. An appropriation of $12,000 was made for the month of January and $9,000 for the next five months to cover running expenses.

STEPS are being taken to have the legislature pass a law prohibiting the distribution of suggestive literature relative to diseases of the sexual organs.

### Washington.

THE GEORGETOWN UNIVERSITY HOSPITAL.—Through the munificence of Georgetown University, the assistance of the medical department of the same institution and the generosity of several prominent citizens, Georgetown Medical School will have a modern hospital under its control for clinical teaching of its medical students. The hospital will have free dispensary, free emergency wards, chambers and wards for pay patients, operating rooms and lecture halls. The conduct of the institution when in operation, will be in the hands of a religious order of sisters, whose services have already been secured. The practical management of the scheme is now in the hands of a building committee, consisting of Dr. Joseph Taber Johnson, chairman; Rev. J. Havens Richards, S. J., president of Georgetown University; Drs. George Kober, C. H. A. Kleinschmidt and G. L. Magruder, ex-officio dean of the medical department.

REPORTED FAVORABLY.—The House District committee has reported favorably the following bills: House bill 9,821, authorizing the Commissioners to collect a fee of 50 cents for the issuance of transcripts from the records of the health department. House bill 9,976, to punish impersonation of inspectors of the health and other departments of the city government.

FOR THE CONTAGIOUS DISEASE HOSPITAL SITE.—The item in the District appropriation bill for the purchase of a site for a contagious hospital met with almost the unanimous approval of the entire House Appropriations Committee. The allowance of $110,000 to be placed in the hands of the Commissioners for the purpose indicated, was voted upon separately. Members say there is little doubt that the item will be approved by the House. The Commissioners already have something like $5,000 left of an appropriation made some time ago for the selection of a site.

TO CHECK POLLUTION OF WATER SUPPLY.—Mr. Gallinger has given notice in the Senate of an amendment he intends to offer to the sundry civil appropriation bill for the investigation of the pollution of the water supply in the city. The resolution is "To authorize the marine hospital service, under the direction of the Secretary of the Treasury, to investigate the sources of contamination of rivers and other natural sources of water supply, where the sanitary condition of the people of more than one State or Territory or the District of Columbia is affected or threatened to be affected by such pollution, and to report upon what legislation is necessary to remove such pollution, provided the first investigation shall relate to the Potomac River."

MARYLAND UNIVERSITY ALUMNI ASSOCIATION.—The first annual banquet of the Washington branch of the University of Maryland Alumni Association was held on January 29 at the National Hotel. Dr. J. H. Mundell was chosen president, Dr. J. W. Bayne and T. Morris Murray vice-presidents, and Dr. L. S. Stone secretary and treasurer.

MEDICAL SOCIETY.—At the meeting of the Society held January 27, Dr. Bishop reported some physical and therapeutic facts on static electricity. Dr. A. F. A. King and Dr. Smart, U. S. A., reported cases of dermatitis from Roentgen rays; Dr. Dufour, a case of foreign body in the nose and presented the specimen. At the meeting held on February, Dr. Fry read the essay of the month, entitled "Report of the Obstetric Work of Columbia Hospital for the year 1896." Dr. Stone made remarks on the preparation of formalin catgut. Dr. S. S. Adams presented a polypus which he had removed from the rectum of a child, 3 years of age.

## THE PUBLIC SERVICE.

**Army Changes.** Official List of changes in the stations and duties of officers serving in the Medical Department, U. S. Army, from Feb. 6 to Feb. 12, 1897.

Major Robert M. O'Reilly, Surgeon, is granted leave of absence for two months, with permission to go beyond sea.

First Lieut. Francis A. Winter, Asst. Surgeon, relieved from duty at Ft. Grant, Ariz., and ordered to Washington, D. C., for examination as to his fitness for promotion.

First Lieut. William E. Purviance, Asst. Surgeon, will proceed from Ft. Columbus, N. Y., to Washington, D. C., and report for examination as to his fitness for promotion.

Major James C. Merrill, Surgeon, will be relieved from duty at Ft. Sherman, Idaho, upon the arrival of First Lieut. G. A. Skinner, Asst. Surgeon, and ordered to report to the Surgeon-General for duty.

First Lieut. Guy C. M. Godfrey, Asst. Surgeon, is relieved from duty at Ft. D. A. Russell, Wyo., and ordered to Ft. Sheridan, Ill., for duty.

The following named medical officers will be relieved from duty at the Army Medical School, Washington, D. C., upon completion of the course about March 12, 1897, and ordered to take station as follows: First Lieut. Basil H. Dutcher, Asst. Surgeon, Ft. Leavenworth, Kan.; First Lieut. Leigh A. Fuller, Asst. Surgeon, Ft. Meade, S. Dak.; First Lieut. Franklin M. Kemp, Asst. Surgeon, Vancouver Bks., Wash.; First Lieut. George A. Skinner, Asst. Surgeon, Ft. Sherman, Idaho; First Lieut. Carl R. Darnall, Asst. Surgeon, Ft. Clark, Texas; First Lieut. William E. Richards, Asst. Surgeon, Ft. Grant, Ariz.; First Lieut. Louis P. Smith, Asst. Surgeon, Ft. D. A. Russell, Wyo.; First Lieut. Marshall M. Cloud, Asst. Surgeon, Ft. Sill, Okla. Ter.

**Change of Address.**

Alford, R. L., from Vadalia to Laddonia, Mo.
Carter, R. H., from Lynville, Tenn., to Belton, Texas.
Cooper, E. H., from Galesburg to Henderson, Ill.
Carroll, C. C., from 509 Fifth Av. to 259 W. 75th St., New York, N. Y.
Fullenweider, R. C., from 582 W. Madison Av. to 7100 S. Chicago Av., Chicago, Ill.
Love, I. N., from 3642 Lindell Av. to 3507 Olive St., St. Louis, Mo.
McDaniel, E. B., from Portland to Cove, Ore.
Mullen, T. R., from Akron to Marcus, Ia.
Poehler, F. T., from Waseca to Morristown, Minn.
Scates, D. W., from New York, N. Y., to 410 N. 12th St., Waco, Texas.

**LETTERS RECEIVED.**

Amos, W. F., Portland, Ore.; Allen, Ulamor, Jersey City Heights, N. J.
Bausch & Lomb Optical Co., Rochester, N. Y.; Ballantyne, Wm. & Sons, Washington, D. C.; Bennett, Chas. E., Wauseon, Ohio; Biddle, James G., Philadelphia, Pa.; Battle Creek Sanitarium, Battle Creek, Mich; Blakely, T. G., St. Louis, Mo.; Birkhahn, A. M., New York, N. Y.; Barnum, F. E., Utica, N. Y.; Beckes, L. M., Vincennes, Ind.; Bush, Bertha E., Chicago, Ill.; Barnes, Wm., Decatur, Ill.
Cato, J. B. Huntsville, Ill.; Chas. Roome Parmele Co., New York, N. Y.; Clark, J. F., Paris, Texas; Cubbage, Samuel T., Philadelphia, Pa.; Carpenter, G. A., Fargo, N. D.; Cook, S. E., Lincoln, Neb.; Colis, S., Philadelphia, Pa.; Cross, Geo. D., Chester, Pa.; Cummings, W. H., New York, N. Y.
Da Costa, H. D., New York, N. Y.
Enos, Thos. R., New York, N. Y.
Files, F. H., Sioux Falls, S. D.; Forline, H. H., Houston, Texas; Fourtin, E. R. P., Foxboro, Mass.; Ferguson & Goodnow, Chicago, Ill.; Froelich, H., Chicago, Ill.; Fisher, Geo. A., Chicago, Ill.
Graves, C. Herman, Chicago, Ill.; Gerrish, M. F., Seymour, Ind.; Gressner, H. B., New Orleans, La.; Grosvenor, L. C., Chicago, Ill.
Hessert, Wm., Chicrgo, Ill.; Horsfall, Wm., Marsbfield, Ore.; Hammond, Wm. A., Washington, D. C.; Hygeia Sanitarium, Clironelle, Ala.; Holms, F. W., New York, N. Y.; Hall, J. T., Chicago, Ill.
Johnson, J. B., Sheboygan, Wis.
Klebs, E., Chicago, Ill.; Kiernan, Jas. G., Chicago, Ill.; Kercher, John, Chicago, Ill.; Krafft, Wm., New York, N. Y.; Katharmon Chemical Co., St. Louis, Mo.
La Coste, H. D., New York, N. Y.; Londonderry Lithia Spring Water Co., Nashua, N. H.; Lippman Bros., Savannah, Ga.
Marchand, Chas., New York, N. Y.; Mayo, C. H., Rochester, Minn.; Mallory, C. H. & Co., New York, N. Y.; Montgomery, E. E., Philadelphia, Pa.; Madden, John, Milwaukee, Wis., (3); Minard, E. J. C., Brooklyn, N. Y.; Mulford, H. K. Co., Philadelphia, Pa.
Newman, Henry P., Chicago, Ill., (2).
Payne, C. C., New York, N. Y.; Pineo, W. P., Minneapolis, Minn.; Pillsbury, E. S., Fruitvale, Cal.; Procter & Collier Co., Cincinnati, Ohio.
Reynolds, T. H., New York, N. Y.; Rook, Chas. W., Quincy, Ill.
Smith, S. E., Richmond, Ind.; Schimmel, M. S., Baltimore, Md.; Smiley, J. L., Wedington, Ark.; Semans, H. M., New York, N. Y.; Shastid, F. H., Galesburg, Ill., (2).
Taylor, L. C., Springfield, Ill.
Vaughan, H. S., Brooklyn, N. Y.
Walsh, Ralph, Washington, D. C.; Webster, Edward H., Evanston, Ill.; Woods, E. F., Janesville, Wis.; Woodson, R. S., New Orleans, La.; Williams, H. S., Durango, Colo.; Wyeth, John & Bro., Philadelphia, Pa.